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SERBO-CROAT	16.45-17.00
FRENCH	17.40-18.15
GERMAN	19.02-19.40
TURKISH	20.17-20.45
GREEK	20.45-21.15
ENGLISH	21.45-22.30
RUSSIAN	22.30-22.45
FOR SOUTH AMERICA:	
PORTUGUESE	00.00-00.15
ITALIAN	00.30-00.45
SPANISH	01.00-01.15
FOR NORTH AMERICA:	
ITALIAN	01.45-01.58
ENGLISH	02.15-02.30
FOR FAR EAST:	
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ENGLISH	11.20
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ENGLISH	19.40-19.55
ITALIAN	19.55-20.10
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FOOD AND AGRICULTURE

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SOME ASPECTS OF THE FISHERIES INDUSTRY IN FINLAND

by Dr. **ERKKI HALME**

Since time immemorial fishing has been one of the original methods of earning a living in Finland. Archeological relics, originating from the stone age, telling of life 8000 years ago, show that in those times fishing, together with hunting, were the principal industries. The spread of the Finnish population in those distant days was determined by the conditions of hunting and fishing.

Since then development has, also in the case of the Finnish people, caused other industries to take precedence to hunting and fishing as sources of livelihood. Now fishing is one of the minor industries of the country. According to recent research, fishing is said to be responsible for only 0.3 - 0.7% of all the national earnings of the nation.

The abundance of internal waters – Finland is known as the country with the greatest number of lakes in the world – would seem to imply that fishing also at the present time would play a much more important part in Finland's economic life. But because of the stern climate of the country, the fishing waters are as a rule relatively poor in fish, and the lack of rich and consistent water areas places narrow limits to the possibilities of evolving an extensive, mechanically equipped fishing industry. Fishing has therefore rested essentially with a number of individual fishermen, which pursue fishing either as their main occupation or as a sideline. Moreover, a considerable portion of the annual catch is used directly by the fishermen in their households and this kind of household fishing is carried out extensively both along the coasts and in the internal waters.

The part of the population actually engaged in fishing is at present comparatively large. The total population of the country is about 4 million. According to the latest assessment there are about 6,500 fishermen households (i.e. such as derive more than 50% of their annual income from fishing), and of these about 10% were resident in the internal parts of the country, and about 90% along the coast or on the islands. In addition there are over 40,000 households where fishing is carried on as a sideline (less than 50% of their annual income derived from fishing), while not less than 150,000 households carried out so called household fishing or 'everyman-fishing'.

Under the exceptional circumstances of the war a so called 'Everyman's fishing law' was passed, the object of which was to give the population an opportunity of replenishing its meagre fare by fishing. Under this law, which virtually was a matter of necessity, everybody was allowed to catch fish freely for his household requirements in anybody's fishing waters. This has naturally tended to kill the interest of the water-owners to develop their fishing waters, a pursuit which before the second world war had become fairly widespread. This law, which has hitherto been renewed for one year at a time, has certainly contributed to the exploitation of the fishing waters; in the districts near the population centres this exploitation has been almost devastating. This exploitation of the fishing waters has also been accentuated because of the fact that the population from the areas ceded under the Armistice Treaty moved into the reduced territory of the country and, to a great extent, is pursuing fishing in the districts where it settled down. The ceded areas included the Laatokka lake waters which used to yield about 3 mill. kilos annually, the Petsamo waters in the Artic Ocean which

were responsible for 2 mill. kilos and the eastern part of the Gulf of Finland where annually about 10 mill. kilos used to be caught. To these losses should still be added the yield of the 5000 lakes in the ceded territory and that of the fishing waters in the areas sold and leased to the Soviet Union. It is assessed that these losses total more than one third of Finland's prewar fishing output.

In reviewing Finland's present fishing prospects, it is nevertheless obvious that even these reduced waters can give more fish than hitherto, provided they are properly attended to and cared for. According to a recent assessment it should be possible to raise the present yield of roughly 50 mill. kilos per annum to 130 mill. kilos by rational care of the waters. This would, however, require fairly radical reforms in the entire fisheries industry and also drastic reorganisation of administration, legislation, trade, industrial activities, organisation of the fishermen, professional training and experimental and research activities.

At present many reforms are being carried out. Steps are being taken to extend the fairly restricted research and experimental activities in the field of fishing economy, in order to gain a clear idea of what scientific principles should be pursued, and what methods adopted to promote our fisheries industry. On account of the economic consequences of the war, especially the war reparation payments, the Finnish state, however, can afford only very restricted means for such pursuits, and in view of this situation private interested circles have recently formed a Foundation for Fishing Economy, the object of which is to promote research with the aid of private donations.

Surprising as it may sound after these preliminaries, the principal difficulty now confronting the fishing industry of Finland is one of over-production and insufficient demand. The reason for this is that the greatest part – about 80% – of the annual yield, consists of the small Baltic herring (*Clupea harengus v. membras*), the nutritive value of which is not nearly as high as that of deep sea herring. The Finnish people during the war was largely reduced to this fish for animal foodstuffs, and the result is that demand now strongly focuses on meat and such other fish as is available. Especially in the spring, when this fish rises to spawn, heavy quantities are caught, but at this particular period it is in its worst condition, dry and poor in fat content. Even in fresh condition it is difficult to market. The difficulty is that no effective method of using this fish for the conserving industry has as yet been discovered. Spring ' herring' has therefore of late been increasingly used as food in fur-breeding and as poultry fodder, but the price obtained for fish so used has been so low that it has scarcely met the cost of production expended by the fishermen. They have therefore found themselves forced to curtail their activities in the spring, which is otherwise the most remunerative fishing season.

Another important source of income for Finnish fishermen, however, has consisted in fishing of salmon (*Salmo salar, Salmo trutta*) in the Northern Baltic, the Gulf of Bothnia and the big rivers of Northern Finland, where the salmon goes up to spawn. In recent years catches of salmon have been exceptionnally good and the fishing has paid very well. For this reason the fishing has been intensified and new fishing methods have been adopted. Of these may be mentioned the fishing of salmon by means of driftnets and by nylon trotlines of special construction. But the history of salmon fishing in Finland appears to be approaching its conclusion. In recent years several of the principal salmon rivers have been harnessed and the hydro-electric power construction still continues. In a few years time at least professional salmon fishing will probably decline and perhaps cease completely unless effective and economical methods are developed of maintaining the salmon stock by means of breeding and other similar means.

In addition to the fishing in local waters one or two fishing companies before the war carried out herring fishing in the waters off Iceland, which in good years yielded as much as 8 mill. kilos. After the war this deep sea fishing has been renewed but unsatisfactory catches during several consecutive seasons have considerably reduced the interest in it.

A very great difficulty for fishing in Finland in recent years was the shortage and dearth of all kinds of fishing nets. Only very restricted quantities of different kinds of fishing yarn and twine were available for distribution to the fishermen, and the same applies to the net weaving establishments which in view of their shortage of raw materials had to use part of their weaving capacity to carry out weaving orders for foreign countries, especially Sweden. Now the raw material situation has improved to such an extent that within a year or two the position as regards fishing tackle should be on the whole satisfactory. This will then afford opportunities of increasing the annual catches, provided that also the development of the fisheries conserving industries and reductions in cost of production ensure sufficiently good economic incentive for expansion.

POST-WAR DEVELOPMENT OF AGRICULTURAL COOPERATIVES IN CZECHOSLOVAKIA

by Dr. **Jan SEDLÁK**
Ministery of agriculture, Prague

Although the Czechoslovak Agricultural Cooperatives can look back on more than half a century's gradual — and sometimes slow — growth with regard to financing and trading, only the post-war period has shown further development possibilities within the framework of the new economic and social regime which is being systematically built up in Czechoslovakia.

During the last three years, since the end of the war, a far speedier development of agricultural cooperatives has taken place in Czechoslovakia than ever before. This post-war period, however, has not only brought about a speedier and fuller evolution of agricultural cooperatives with regard to their numbers and economic and social activities, but also a change in their function in Czecholovakia's economic life. Czecholovak experts nowadays unanimously recognize that the economic function of agricultural cooperatives is not an unchanging phenomenon ; moreover, the opinion prevails that changes in production conditions and social systems have bearing upon the functions and tasks of agricultural cooperatives.

This change can be noticed, as a matter of fact, both in the traditional types of agricultural cooperatives which date back as far as the end of the XIXth and the beginning of the XXth centuries and which accordingly have developed during the last decades, as well as in the newer types of agricultural cooperatives called into being by present circumstances. Foremost among the traditional types are the agricultural credit cooperatives which, in Czechoslovakia, largely follow the *Raiffeisen* model. There are many other cooperatives which deal with the selling or processing of agricultural products or which purchase the commodities required by the farmers. The selling of agricultural produce and the granting of credit on a cooperative basis is not an innovation in Czechoslovakia. There is, however, a very marked difference between the early and more recent cooperatives as regards the range and importance of their activities, as also in their relationship to the social system.

Before explaining the character of these changes, it will be as well to give a brief survey of the various types of Czechoslovak agricultural cooperatives, together with some statistics.

Agricultural Cooperatives in Czech Regions

(Refers to the provinces Bohemia and Moravia only).

	Principal groups (I, II, etc.)	Groups (1, 2, etc.)	Sub-groups (*a*, *b*, etc.)
I. – *Credit cooperatives* . . .	3,452	—	—
1. – Kampeličkas	—	2,905	2,905
2. – Saving cooperatives . .	—	547	—
(*a*) Guarantee limited . .	—	—	86
(*b*) Guarantee illimited . .	—	—	461
II. – *Buying, selling and production cooperatives* . .	1,268	—	—
1. — Buying and selling . .	—	195	—
(*a*) Warehouse	—	—	195
(*b*) Consumer	—	—	—
2. – Dairy	—	234	—
(*a*) Collecting	—	—	7
(*b*) Producing	—	—	227
3. – Mill and bakeries . . .	—	45	—
(*a*) Mill	—	—	31
(*b*) Bakeries	—	—	14
4. – Alcohol-producing (Potatoes processing) Cooperatives	—	388	—
(*a*) Alcohol	—	—	377
(*b*) Selling of potatoes . .	—	—	11
5. – Chicory-kilns	—	31	31
6. – Forestry	—	150	150
7. – Animal husbandry . .	—	29	—
(*a*) Breeding of cattle . .	—	—	24
(*b*) Breeding of poultry . .	—	—	4
(*c*) Others	—	—	1
8. – *Other agricultural cooperatives*	—	196	—
(*a*) Flax	—	—	19
(*b*) Wine and Fruit . . .	—	—	44
(*c*) Horticulture	—	—	13
(*d*) Seeds	—	—	8
(*e*) Fisheries	—	—	21
(*f*) Other production cooperatives	—	—	26
(*g*) Other cooperatives . .	—	—	65
III. – *Other supplementary cooperatives*	7,151	—	—
1. – Electricity	—	2,030	2,030
2. – Machines	—	4,900	4,900
3. – Water supply	—	36	36
4. – Pasture	—	165	165
5. – Dwelling	—	—	—
6. – Printing	—	1	1
7. – Other	—	19	19
IV. – *Central organizations* . .	10	—	—
1. – Credit	—	2	2
2. – Buying, Selling and Producing	—	8	8
3. – Supplementary	—	—	—
V. – *Other members*	25	25	25
TOTALS . . .	11,906	11,906	11,906

Agricultural Cooperatives in Slovakia.

Unions of Cooperatives	7
Buying Centre	1
Credit Cooperatives	833
Agricultural Mutual Funds	58
Food Cooperatives	1,059
Warehouses	14
Alcohol-producing (small scale) . .	11
Alcohol-producing (bigger units) . .	71
Dairies	43
Electric-works	1
Farm Cooperatives	73
Machinery Cooperatives	478
TOTAL . . .	2,649

The agricultural credit cooperatives, the oldest type of cooperative, since the first was founded in 1845, nowadays have a different function from that prior to the war. Formerly these cooperatives supplied the farmer with credit at the best possible rate; at present, agricultural credit in Czechoslovakia is regulated by the Agricultural Credit Bill by which the farmers are accorded State guarantees for loans contracted and the rate of interest is fixed at 3% for longterm loans and 3½ % for short-term loans. (previously farmers used to pay 4½%). Henceforth the credit cooperatives will provide these State guaranteed loans, but their other function, *i.e.*, the arranging for the most advantageous credit conditions, is to be taken over by the State which controls the money market. The assignment of the functions of nationalized banks and the cooperatives is also regulated. Part of the work of the agricultural credit cooperatives will be to foster the practice of savings accounts by propaganda in the country, and to accustom the farmers to make payments by means other than cash. According to the Credit Plan and the Agricultural Credit Bill, they are to assure, from the technical standpoint, the entire agricultural credit service.

The warehouse and milk cooperatives have also made appreciable progress. The warehouse cooperatives see to the purchase of the goods required by the farmers, and buy their agricultural produce. They are generally large cooperatives with a range covering some 50 to 80 villages, and average 3000 to 3500 members. It has taken these cooperatives some considerable time to reach their present important status. The milk cooperatives have

followed the same trend, and the former local dairies set up half a century ago, have developed, particularly during the last few decades, into centres which collect milk from over a score of villages.

In the last three years, there has been an increase in the quantity of agricultural produce purchased from the farmers through the cooperatives and the goods supplied to them. Thus, for instance, in 1937 the agricultural cooperatives only covered 12% of the livestock trade, whereas they now have practically a monopoly in this sector. In the same way, the entire fruit and vegetable output is purchased by these cooperatives ; 90% of the cereals, oilseeds, pulses and potatoes are bought up, and it is expected that before long they will hold an exclusive position in this trade also. The greater part of the milk supplied by the farmers is processed in cooperative dairies.

These results have been attained through the appreciable assistance given by the State authorities who strongly support extensive participation of agricultural cooperatives in the execution of economic programs. The agricultural cooperatives have acquired the monopoly of the livestock, fruit and vegetable trade by government order. This brief report shows the extensive development of agricultural cooperatives in Czechoslovakia and their importance for the food rationing system. Thus, it is evident that planned economy affords cooperatives increased possibilities of development. This leads to higher membership and in many districts all the farmers are cooperative members while, prior to the war, on an average only 60% joined.

These details on the activities of agricultural cooperatives, however, do not explain their present functions from the economic and social aspects. Formerly, the chief aim of the agricultural cooperatives was to secure the most advantageous selling or purchase prices for the farmers, irrespective of whether the produce was processed by the cooperatives (milk) or resold (cereals, livestock). The first cooperatives were set up by the farmers to make themselves independent of private trade which utilized its social importance to fix prices. Therefore, the cooperatives sold the farmers' produce at the best possible price and purchased the goods they needed at the lowest price obtainable. Under the present economic system, the prices are fixed by the State and the farmers' position is safeguarded. This means that the agricultural cooperatives no longer have to engage on price policies and farmers no longer need to defend themselves against private trade or industry as these economic branches have been nationalized for the common benefit of the whole nation. On the other hand, the agricultural cooperatives, because of their unique position in the buying and selling trade for farmers, are becoming an important factor in the economic structure which is markedly contributing to the execution of economic programs, by securing adequate food supplies and establishing a socialist system. The agricultural cooperatives are now undergoing a change in their mode of operation. In the last twenty-five years many of the Rochdale principles have been abandoned, for example, the one member one vote practice ; dividends were not distributed in kind but in the form of interest on shares ; in brief, cooperatives showed a certain capitalistic tendency. This influenced the commercial activity of the cooperatives, especially the central branches which frequently turned their efforts to making profits instead of fostering the development of agricultural production. This situation no longer exists and agricultural cooperatives contribute towards improved agricultural production by setting up disinfection stations or by organizing spraying of fruit-trees, etc.

In the early stages, the main problems concerned agricultural credit and the disposal of the crops. Consequently, the credit and selling cooperatives were the first to be established. As these problems have now been settled, work is mainly directed to the improvement of agricultural production and farm mechanization. In the past three years, cooperatives operating in this direction have made marked progress. Cooperatives also play an important part in the mechanization of farming. Although 95% of the farms in Czechoslovakia are under 20 ha. insize and there-

fore the individual farmer cannot buy and profitably use heavy tractors or machines like threshers, combines, etc., this does not mean that farming cannot be mechanized. The solution is machinery cooperatives. In May 1945 there were 220 of these cooperatives, while they now number 4500 and are still increasing. The cooperative use of farm machinery promotes technical progress in agriculture to the benefit of small and medium farmers. The work of the farmer's wife is also made easier as about 400 machinery cooperatives have mechanical laundry facilities.

In the frontier districts pasture cooperatives have recently been set up to administrate 140,000 hectares of mountainous land. The cooperative members, most of whom are located in the central districts, send their young livestock to these mountain pastures for the spring and fall season. In this way, stock which were kept almost continually in the stable will gain in condition and animal production will improve. The agricultural cooperatives thus contribute direct towards improvement in output and quality.

All these cooperatives group farmers who run their farms on an individual basis. Collective husbandry is comparatively less advanced in Czechoslovakia as there are only 28 agricultural cooperatives which work the land according to the collective system.

Contrary to the pre-war period, efforts are now being made to attain closer cooperation between the agricultural and the consumer cooperatives. These efforts have resulted in the establishment of the Central Board of Cooperatives, which exercices joint control over all the cooperatives in Czechoslovakia thus obtaining unity in the cooperative movement. At the same time, all the agricultural cooperatives have their commercial centres in every region (Bohemia, Moravia, Slovakia) which supervise the specialized branches of their activities.

Consequently, like nationalization, cooperatives have an important function in Czechoslovak economy. This is evident from the fact that cooperatives were not subjected to nationalization. As already mentioned, agricultural cooperatives working on similar lines have been set up in the frontier districts which, after 1945, were again settled by the Czechs.

LAND IS 'DEAR' IN ITALY

by **GLENN E. RIDDELL**

FAO soil conservationist, assigned to Italy

Is it economical to spend 2,500,000 lire per hectare or about $ 1,700 per acre to prepare rocky land for grape culture? Or can one afford to spend 1,000,000 lire per hectare, $ 680 per acre, for diking and draining swamp land for cultivation? Such things are done in Italy where 46,600,000 people (1947) must live from an area four fifths that of the state of California. This represents a population of 150 persons per square kilometer in Italy. Moreover 48% of the working population is employed in agriculture on this relatively small total area of which only one fifth is classified as plain whereas two fifths are hill and two fifths mountainland. Professor Gino Passerini, the designated head of the Central Soils Institute and a recognized authority on land problems in Italy estimates that there are only 44 million acres suited for cropping out of 77 million acres actually being cultivated.

Hunger for land in Italy is now greatly in-

tensified by the fact that population has increased more than 10% in the past ten years. At the same time land resources have been greatly depleted by conditions growing out of war. The direct damage to land and to improvements by military operations was great but much greater was the depletion due to over intensive use at a time when there was great shortage of materials, equipment and other means for the treatments that are necessary to maintain productivity.

International visitors observe land conditions

The participants in the FAO sponsored international meeting on soil conservation held at Florence, in September 1948, visited Broglio in Siena Province. Here they saw rocky land being broken to a depth of 1.1 metres. Hand tools and explosives were used to dig out trenches across the slope to the proper depth. The trenches were then refilled with broken rock and covered with soil. (See photos 1 and 2). This land preparation was being carried out at a cost of 2,000,000 to 3,000,000 lire per hectare. There are provisions by which the Italian Government can pay 33 to 38% of the cost of such land development work. When funds are available this work is done by public assistance. At the time of the above mentioned visit, however, the owner was carrying on the work by means of his own resources. Some workers who must be retained, although not required in cultivating and harvesting crops, are employed on this job.

ROCKY SLOPES TO PRODUCTIVE VINEYARD

1. — By explosives and digging by hand the rock and soil are broken to a depth of 1.1 meter or about 3.5 feet. The man in the background is placing large pieces of rock in the bottom of the excavation. These will be covered by small stones and soil.

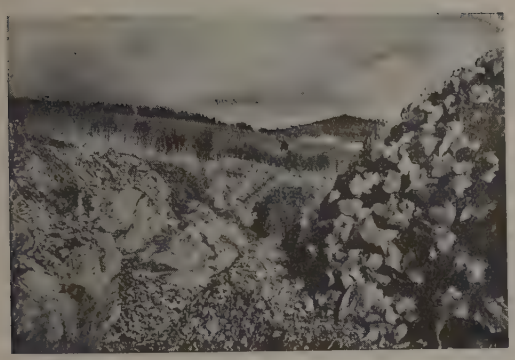
2. — The rocky slopes of Broglio Castle in Tuscany now support highly productive plantings of vines and olive trees. This area is well « systemized » for soil and water conservation. The vineyard in the foreground is a part of the same slope pictured above and was prepared in the same way.

The Soil Conservation tour also included a visit to the valley of the lower Po River where lagoons were being diked and drained at an initial cost of about 1,000,000 lire per hectare, with additional expense for preparing the land for cultivation and operating and maintaining the drainage system. Several *Bonifica Consorzios* or land reclamation districts were visited where expensive works were being carried out to reclaim eroded clay hills or ' calanchi '.

Rock walls being built and filled with fine rock and soil to form productive terraces is not an uncommon sight. It is the human effort expended rather than the cash outlay required that impresses one on seeing terraces being built, as in the case pictured (See photos 3 and 4), of work being done on the slopes of Mt. Etna.

All such measures are spectacular efforts to satisfy demands for productive land, and are supported by a national consciousness of an alarming shortage. The Italian Government has passed laws that provide well for government assistance to such projects for reclamation and land development. When funds are available for public improvements, or when surplus labor must be employed in projects of public benefit, the organizations and the technicians that plan and supervise *bonifica* works are prepared to offer many new projects of various kinds.

Although the government has as yet given slight recognition to the possibilities of public



3. — On the slopes of Mt. Etna volcanic rock is sorted and placed by hand in building terrace walls and filling them. Note the pile of soil that has been brought in baskets for surfacing the benches. The canes on the completed flat indicate where trees are to be planted.

4. — These rock-wall bench terraces in Messina Province are intensively cultivated to vegetables, grain, forage, nuts and fruit.

benefit that might be derived from better use and treatment of agricultural land, there is growing awareness among many agricultural leaders of the importance of soil and water conservation. Professor Passerini estimates that more than 10,000,000 hectares (25,000,000 acres) of crop and pasture land need soil and water conservation treatment. Ten years ago the *Accademia dei Georgofili*, an association of leading agricultural scientists in Italy, discussed the need for a public agency to give assistance to land owners in planning and carrying out soil and water conservation work. More recently the Accademia proposed legislation for *Consorzi preventivi*. This proposal would provide for organization to do soil conservation work on farm lands and for the administration of public assistance in a similar way to that in which land reclamation work is carried out under the *Consorzio Bonifica*.

In 1947 the Ministry of Agriculture and Forestry received an allotment of UNRRA Lire Funds to initiate research, survey and demonstration phases of a soil conservation program that the Ministry proposed to carry out. This is to be conducted under a new agency of the Ministry, the Central Soils Institute. Such a beginning should lead rapidly to the widespread and effective attack on problems of soil and water conservation.

One influence to hasten erosion control work is the concern by those who are responsible for various phases of water and land development projects, for the damage being done to reservoirs, canals and down-stream lands due to erosion and excess run-off from agricultural lands of the watershed. An engineer in charge of planning and construction of several reservoirs recently said that of five dams to be constructed, the building of the one that would be most valuable and efficient must be postponed due to erosion conditions in the watershed. In another case the engineer in charge of building a large reservoir remarked with alarm that run-off from the drainage basin amounted to 20% and at times carried as much as 8% silt.

Public concern for saving investments made in reservoirs, irrigation canals, and stream control structures may contribute to saving much greater total values in the lands of the drainage basin where water that now causes damaging floods could be retained to improve crop yields. In the Islands and in many parts of the Italian mainland, water is the limiting factor affecting crop and livestock production. The establishment of erosion control and water conservation measures on crop lands, pastures, and forests can increase greatly the amount of water that is retained in the soil for crop production and make the flow in springs and wells more abundant. The agricultural and forest lands of Italy in fact offer a far greater and more practical potential storage

reservoir of water for crop production and community purposes than can be developed by the creation of artificial lakes.

The job is difficult

Although values to be conserved are great, the obstacles to be overcome in putting soil conservation measures into effect are also great. It is almost an invariable fact that all discussions of land problems in Italy must be introduced by the statement that " there are too many people ". This indicates in few words the social and political phases of the problem.

Some of the other factors that combine to make the problem in Italy a most difficult one are as follows:

(1) Such a large part of Italian land is subject to erosion because it is steep and of soil types that are erodible and of low permeability.

(2) Rainfall is concentrated largely during the late fall and early winter months, especially in that portion below the Po Valley, and frequently occurs in high intensity. The scarcity of summer rainfall combined with the effects of bright sun and hot winds, normally makes the maintenance of a protective cover of vegetation difficult especially in south Italy and the Islands.

(3) Prevailing rental practices are not favorable to investments in land protection or improvement either on the part of owners or on the part of the operators.

(4) Vineyards, olive and fruit plantations are established without conformity to the requirements for soil conservation on a great portion of the sloping agricultural lands. To put into effect the needed soil and water conservation measures on these would often cause great immediate sacrifice of trees and vines.

(5) Over-grazing by cattle, sheep and goats prevails in pastoral areas.

(6) Great demands for feed, forage, fibre and fuel discourage rotations for maintaining soil fertility and cause little crop residue to be left on the land. Crop residues and weeds are commonly collected and used for fuel.

(7) Educational arrangements are not well developed for bringing information to farmers which would cause them to undertake soil conservation work or which would acquaint them with new methods.

(8) Because of the limited financial resources available for the support of programs already under way and for the established institutions, agricultural officials delay the undertaking of new programs.

(9) There is no well defined public policy with regard to protection and improvement of productive agricultural lands.

Many favorable factors

In spite of evident obstacles there are many features in the Italian situation that are favorable to sound progress in soil conservation.

(1) The fact that the need for increased agricultural production is of such prevailing concern should cause farmers, responsible officials, and the public at large to have great interest in soil conservation measures that promise more abundant and dependable production.

(2) Good conservation measures are to be found on many farms in Italy and in some communities land owners generally are giving much attention to protection and good treatment of their lands. The technical information available and the experience of farmers who have tried various measures for protection and improvement of their soil would be useful in a widespread attack on problems of the land.

(3) Some Italian agricultural leaders believe that agricultural production can be increased to a much greater extent and more economically through improved treatment and management of lands now being farmed or grazed than by the reclamation of lands that are now unproductive.

(4) The *bonifica* consortia organized for land reclamation and development offer a good guide for similar cooperation between the government and land owners in establishing the necessary conservation measures on agricultural lands. There are now 22 million acres

included in land reclamation and improvement districts or *Bonificas*.

(5) Many technicians of excellent basic training and experience are available and could be readily equipped with the special knowledge and trained in the skills required for planning and supervising soil conservation work.

As the determination to accomplish definite soil conservation objectives grows stronger among government officials and others concerned, technical and material resources now unused will be found available. The government will find ways and means to give appropriate assistance to farmers in the interest of public welfare. Soil conservation research, surveys, and education will be doubly efficient and effective when directed to meeting definite needs or to getting specific jobs done on the land.

Because land is so ' dear ' to Italian farmers they will probably soon adopt better practices and apply treatments for soil conservation when they are aware of the benefits obtained, understand the methods to be used, and have the needed technical assistance to plan and install the conservation measures required. The establishment of the Central Soils Institute as the agency of the Ministry to promote soil conservation is an initial step which should lead to cooperation between the Government and the farmers in this job that is so important to Italian welfare.

The need for international collaboration between Mediterranean countries *

by **A. PAVARI**
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Prof. Guirner has just given a brief and concise account of the origin of the '*Silva Mediterranea*', that is, of the International Forest League of Mediterranean countries which was set up by Robert Hickel. After the long and sorrowful war interlude, this League is now preparing, in a new form and with the support of FAO, to resume its activity.

Permit me to express my views on the treatment of the items on the agenda and, more generally, on our program of work.

The items are grouped under three main heads :

1. — *Economic and human problems.*
2. — *Technical problems.*
3. — *Psychological and propaganda questions.*

In what way and to what extent can useful international collaboration be accomplished in these three sectors ?

The Mediterranean Basin is a large geographic unit and, to a certain degree, may also be considered as an oecological unit from which derives one of the fundamental causes of the physical and economic situation of the Mediterranean countries and of the characteristics of their peoples. On examining the actual position in the different Mediterranean countries, however, it will be found that there are very marked and sometimes very considerable differences in their economic and social structure, independent of political influence and trends which also play an important part in determining the various economic and social conditions.

On placing the forest problem within the framework of this ensemble, as is natural, it will be seen that it presents a very different

* Extract from the speech made at the opening Session of the Sub-Commission for Mediterranean problems of the European Forestry - Forest Products Commission - Rome - December 1948.

aspect in each country. For instance, how can Italy a country with a very dense population, where by continually intensifying agriculture an attempt is made to increase the yield of a limited area and where the greater part of the land is governed by the Mediterranean climate, be compared to a country like France much richer in resources and with a lower demographic density, which has only a small part of its European territory in the Mediterranean climatic zone ? And again, look at the profound differences between the European nations with an ancient civilization like Italy, France, Greece, Spain, Portugal, and the vast African Mediterranean territories where, living by the side of the European settlers are the native populations, *e. g.*, the Arabs, who play a very important in the agricultural, forestry and pastoral economy !

These summary comparisons will suffice to show us, that it is absolutely impossible to establish a common program of forest policy, legislation and administration, and that consequently each country should be free to chose the directives, modes and methods considered the best and the most suitable for its special conditions.

Even in regard to the specific problems in this sector as, for example, that of forest pasture, a common course cannot be adopted in the different countries because evidently the relative positions of grazing and the forest differ very appreciably according to the density of population, the degree of social organization and the intensity of the different forms of cultivating the soil.

Therefore, an international collaboration for this important group of problems should not aim at the vain illusion of a unification, even in their general outline, of the directives in forest policy, but rather consist of a fruitful and continual exchange of information and documentation. In this way those concerned in the different countries will be able to know, as exactly as possible, what is being done in the other Mediterranean countries, and make useful comparisons, retaining those ideas, new ventures and measures worth studying for eventual application in their own countries.

In this respect, considerable mutual advantage, could be obtained not only from the present but also historical documentation.

On the other hand, great caution should be observed in the case of forest statistical data, apart from the question of their exactness.

In fact, it has now become customary to estimate the extent of the forest wealth of a given country, and consequently draw up forest policy programs, by comparing, according to country, the ratio of wooded area to territorial and productive area, or the so called relative area under timber per inhabitant, etc.

In my opinion, these comparisons are of little value and are even illusory in the case of countries which differ so widely in their physical and economic characteristics. Even for the Mediterranean countries these statistical comparison have no absolute meaning. For example, statistics indicate that Greece has a higher forest quotient per inhabitant than Italy (*), but this comparison is of little value unless the formation, distribution and production capacity of the forests of the two countries can be studied in relation to protection needs and soil conservation, water regime and the requirements of the country according to its economic, agricultural and industrial development and the standard of living of the people.

Further, how can the wooded area which each country should possess be estimated if no account is taken of the timber resources outside the forest, for instance, fruit-growing which is so widespread in many Mediterranean countries, or field trees ?

And again, what about the great difference in the natural resources of each country, to mention only fuels ? For instance, Italy which has practically no pit coal and petroleum has to fall back on wood to lighten the heavy imports of these products, while Syria, very poor in timber, is very rich in petroleum, and Spain, also poor in timber, possesses, rich coal-mines.

In conclusion, all programs aiming at obtaining in each country a specific percentage of

* 0.36 ha. against 0.11.

afforestation established by comparison with other countries which apparently are in the same situation, are not worth consideration.

Quite the contrary is needed : the forest area desired can only be obtained through a combination of local programs covering well defined territorial units, as for example, the catchment basins ; a crop plan should be devised to improve the physical, hydraulic and economic conditions of this territorial unit.

The area to be afforested, therefore, will be defined in this regulating plan since the forest will be a part of it.

As regards the nature of forest production, here again set rules cannot be followed ; I have already pointed out that, in Mediterranean countries the coppice system should not be considered *a priori* as a poor and backward form of silviculture. On the other hand, the vertiginous progress attained in the technique of timber utilization may upset all previsions for a production cycle as slow as that of the forest.

The next important sector — technical problems — has a very different aspect. Here, without losing sight of the inevitable action of the human factor on technique, we are faced mainly with physical and biological factors in the study of which we can develop a fruitful collaboration with a view to specifying in some cases, joint objectives and methods.

Unlike forestry in Central Europe, in the Mediterranean countries, to keep pace with the progress accomplished, the scientific, experimental and technical bases will have to be considerably widened and consolidated. The main subjects are oecology, phytosociology and genetics, and this fact alone suffices to indicate the vast field of collaboration and progress open to us.

In effect, if world forestry has to develop and advance according to the natural laws of the forest, this is particularly true for the Mediterranean countries where the forest is in a very delicate balance with the physical environment, and where man has always had a decisive retarding or developing action.

I therefore venture to assert that our collaboration should concentrate in these three subjects, as it is only on the basis of their general principles that pure technique can be interpreted and fully utilized in the various details applicable to each specific case.

By this I do not intend to detract in any way from the importance of a close collaboration in regard to pure technique, insofar as concerns the treatment of the different types of Mediterranean forest, and the difficult work of re-afforestation, which is one of the most important and least easy undertakings to tackle and to accomplish in the Mediterranean countries.

I would say that this also holds true in the case of technical protective measures against over-grazing, forest fires and diseases. To take a concrete example, the fixing and re-afforestation of dunes have improved and become a more general practice in recent years in the Mediterranean countries, deviating from the classic methods employed first for the dunes of Gascony and the Baltic coast.

In this connection, there was sometimes a surprising similarity in the technique adopted in the different countries. The collaboration initiated by the '*Silva Mediterranea*' contributed greatly to this end ; very probably many failures would have been avoided and more rapid progress achieved if this collaboration had been closer and better organized †.

Another problem which I give as an example is that of the treatment of Mediterranean forests particularly as regards methods of natural regeneration and rotation felling. In the latter case, in following the principles adopted in other environmental conditions and with other forest species, there is always a considerable element of doubt mainly due to inadequate experimentation, as interesting studies carried out in Palestine and Spain have shown.

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† One of the most important tree species in the Mediterranean Basin, the chestnut-tree, is seriously menaced by the appearance of *Endothia parasitica*. For the control of this disease, the protection and improvement of such a valuable species which we have now undertaken in Italy, a close collaboration between the countries concerned would be most useful.

Apropos this collaboration which it would be desirable to establish between our countries in this vast technical and scientific field. I would like to distinguish, at least approximately, (since a definite distinction is impossible) the function of the forest research institutes and that of the technicians who direct the practical application of forestry principles.

In my opinion, the task of collaboration in the first sector should be allocated to a specialized organization, namely, to the International Union of Forest Research Institutes, to which all Mediterranean countries should belong. On the other hand, our Sub-Committee should be entrusted with reporting the problems which scientific research and experiments must solve, and with establishing close collaboration in technical application.

I will conclude these few remarks by mentioning that, in the Mediterranean countries, besides the forest itself, account should be taken of another important asset capable, on the one hand, of constituting an effective means of progress in agriculture and, on the other, of forming an important supply of lumber : I refer to the windbreaks and other tree stands growing with field crops.

In this respect, Italy a striking example with its poplar stands in the Po Valley, which supply a good part of Italy's lumber requirements, thus compensating the low output from the forests.

I have here some significant figures. According to the latest Italian forestry statistics, for 1946-47, the forests supplied :

in lumber	3,693,110 cubic metres
in fuel	11,400,000 cubic metres

During this period, poplar production alone amounted to 2 million quintals, as seen in the special tables in these statistics under ' forest ' ; but, at the same time, the field trees in the Po Valley furnished 8 to 10 million qls. of lumber. This figure corresponds to approximately 700,000 cubic metres.

On adding the lumber production of other regions of Italy, we easily have over 1 million cubic metres. This means that field trees and, in particular, the poplar, not included under forest statistics, have a lumber production equivalent to about a third of that of the forests.

As regards fuelwood, over 12 million cubic metres per year are obtained from non-forest trees, while the forest supplies 11,400,000 cub. m., being inferior to the former.

Throughout central Italy and especially in the south, windbreaks and field trees may, in the near future constitute an important source of wood, and are certainly easier and quicker to establish than the modification of existing forests.

Apart from these future possibilities, in many southern provinces of Italy, the fruit orchards now supply an important quantity of wood, at least for fuel. For instance, Apulia has practically no woods, but the situation in the tableland of Foggia, where there are no trees at all, is very different from that in the very rich olive-growing zone, which extends from Bari to Lecce, where the olive in particular, but also almond-trees, grapevines, etc., offer an abundant supply of timber to the population.

Another instructive comparison is that of some Sicilian provinces which have absolutely no woods at all ; in Syracuse Province there are extensive tree crops, while in the inland provinces like that of Caltanisetta, not only are there no woods but no fruit-trees either.

I mentioned this example to show once more how incomplete and misleading are the estimates of lumber production in the Mediterranean countries, based only on forest output.

I now come to the last item, namely the psychological factor, the education of the public and propaganda in favour of the Mediterranean forest.

In this respect, the main problems consist in deciding to what section of the public the propaganda should be addressed, and the terms and manner of same.

In an article published in 1947 under the title ' *Il problema forestale del bacino mediterraneo* ' (The forest problem in the Mediterranean Basin), I recalled the brilliant report presented in Madrid in 1911, by the late Robert Hickel, then President of the ' *Silva Mediterranea* ' :

" The members of the International Congress held in 1907 could view from Palermo the bleak and denuded rocky outline of Mount Pellegrino, an outstanding challenge to the efforts of the valiant foresters who are attempting to reafforest it. And yet, tradition has it that the Carthaginian forces camped under the shady trees of Mount Pellegrino.

" Even more depressing are the remains in Algeria of the great Roman cities with their temples, their palaces, theatres, aqueducts, cities which have been dead for many centuries, in a treeless and waterless desert.

" Such vestiges can be encountered practically throughout the Mediterranean area and the difficulties which hinder re-afforestation operations are the same in nearly all the Mediterranean regions which are closely related in regard to climate, flora and the mentality of the uneducated mass of the people.

" As regards the mental habits of the populations, perhaps the existing analogies might be explained, at least to a large extent, by the fact that many countries in the Mediterranean region were the scene of the same secular struggles. First, there was the invasion of the Barbarians, the Visigoths who, after having ravaged Italy, settled in southern France and in Spain ; the Vandals who merged into the populations of North Africa. Broken, the Roman power foundered in the contest with the Barbarians and at the same time were destroyed the great Roman works, especially the aqueducts whose ruins are still scattered in Spain, France and Africa.

« And then, from Algeria and Marocco, the Musulman onslaught on Europe and the eight centuries of fighting which followed. For three centuries the Mediterranean was a Musulman lake».

« In this mixing of so many different peoples, appreciably the same everywhere, a uniform mentality of the masses seems to have resulted, which might be termed Mediterranean mentality, a so to speak shepherd mentality, because one of its distinguishing features is an atavistic attachment to pastoral life. The shepherd is the foe of the forest, especially the growing forest. It matters little if the herdsmen of the goats and sheep are Spanish, Sicilian, Provençal, Arab or Kabyle, they all have the same pastoral habits, the same disregard for the forest, and what the animals leave untouched is finished off by fire ".

In the aforesaid article I added following remarks which I take the liberty of repeating here:

" The outlook is depressing, but true. What is important is the general character of this phenomenon: the encroachment of grazing, especially nomadic grazing, on the forest, which is a decisive factor in the retrogression and destruction of the forest. In turn, this destruction has much more serious consequences under the hot and dry Mediterranean climate than in other cold and temperate climates. The disappearance of the forest cover, the rapid destruction of the humus, soil erosion facilitated by torrential rains, the ensuing hydrological disorder, loss of top soil, and frequently wind erosion are successive stages which rapidly and fatally lead to the desert or marsh, that is, to the physical ruin which has destroyed so many formerly fertile and rich regions, and which is still continuing today ".

These evils cannot be attributed to any specific policy, nor to any special legislation of any Mediterranean country. It is, I repeat, a general phenomenon. Naturally, their causes are more complex than those indicated in the rapid synthesis of Hickel. The pressure of grazing on the Mediterranean forest may be lightened by progress in agriculture and especially by fruit–tree–growing, as the cultivation of herbaceous crops without irrigation is risky.

Fruit–tree–growing, as I have already mentioned, has always been considered important in the Mediterranean countries, and it may seem strange that the Mediterranean farmer gives so much care to the olive and the almond tree and the grape vine, while he pays no attention to the forest which he destroys or allows to be destroyed.

This difference in attitude, however, is justified by the poor yield wich the Mediterranean woods generally offer in comparison with fruit–growing. The latter, on the other hand,

in view of the capital and trained labour required, is an intensive crop and consequently is limited to local conditions.

If conditions only permit extensive cultivation, pasturage is inevitably found to be more profitable than farming without irrigation or silviculture. The dry summer weather draws the sheep to the woods, especially the goats which can fully utilize the xerophilous and spiny vegetation. If, therefore, the mentality of the Mediterranean peoples has become through the centuries, essentially pastoral, the main reason is that pasturing outside and inside the forest is economically the most profitable activity. On the other hand, grazing in the woods is the most adverse factor in its conservation, The Barbarian invasions and the influence of Moslem fatalism have been indirect rather than direct causes which have only accentuated the consequences of the rigid economic laws dictated by oecological conditions.

It must be admitted that the destruction of the forests in the Mediterranean countries, with the subsequent soil erosion, had begun long before the invasion of the Barbarians, since Xenophon, speaking of the mountains of Attica, compared them to the calcined bones of a skeleton. Many references could be quoted to show that deforestation dates back to the earliest Mediterranean civilizations.

The origin of this Mediterranean mentality which is deprecated by Hickel is evident in the fact, cited by Berenger in his *Forestry Archaelogy*, that with the Phoenicians and the Greeks, the sacred woods were not the natural forests but the olive, fruit or palm groves. Even then, as you can see, fruit-trees were considered more important than the forest treees.

Must we, therefore, accept as inevitable the gradual destruction of the forests which remain and the absolute predominance of nomadic grazing, the chief cause of this destruction? Undoubtedly no, since as history teaches us, it is a question not only of an upset in the balance of crops, but also in n atural forces, which has terrible consequences: the desert, the drying up of all sources of life.

Therefore, we must fight against this reaction and endeavour to restore the normal balance.

Everyone well knows, however, that neither drastic official forestry measures nor an extensive re-afforestation program can give successful results unless a favourable economic and social environment is established.

The problem, therefore, is very extensive and complex, and for its solution needs, besides the foresters, the assistance of more authoritative circles, even political. Think only of all the measures to be taken to facilitate the gradual passage from extensive cultivation to intensive cultivation, and in particular, to arboriculture, which rules the Mediterranean zone.

I think it is clear from these few remarks that it is practically useless to appeal to the shepherds and to lessors of grazing-rights, as their mentality only permits them to see the profit to be obtained in the present, not any eventual future benefits.

Every effort should be made to reduce nomadic grazing, and consequently changes will have to be made in agriculture by means of arboriculture and, wherever possible, irrigation.

Propaganda for these changes should be addressed to extensive political and technical sectors, with particular attention paid to the farmers in the regions where agriculture is of a mixed type, that is, agricultural and forestal, or agricultural, pastoral and forestal, since in these cases (prevalent in central Italy and in many regions of Spain), full utilization is made of the forest while nothing is given in return. The result is that farming and grazing are parasites of the forest instead of operating in a harmonious symbiosis.

Rational and effective propaganda, therefore, for solving problems of a general character, should be directed to the government and administrative circles, as, for example, protection of the soil by the forest, while for local problems, concrete situations should be treated.

In the case of propaganda of a general nature, considerable support could be given by important national organizations of a popular type like the Touring Club which has al-

ready done valuable work in this connection in both Italy ad France. Joint action on an international basis by associations of this kind could be very effective.

Now, before closing, I would like to call attention to an important question which concerns the limits of our activity.

We speak of the Mediterranean forestry problems, but what are the oecological and territorial limits within which we should work?

I do not think this is an idle question, because the different countries which are located in the Mediterranean basin do not have the same area dominated by the true Mediterranean climate, which is certainly the origin of all the most characteristic aspects of the relations between man and soil which mark the life of Mediterranean countries. For instance, in Italy, there is no question of a Mediterranean problem in the Alps, and likewise in France and in Spain for the provinces dominated by the Atlantic climate.

An international agreement, therefore, is required to specify what we should consider as Mediterranean territory properly so called, in regard to our joint work.

Going on from the pure territorial to the oecological point of view, it is to be noted that other continents have climates closely resembling the Mediterranean climate, as, for example, in a part of South Africa, in Australia, and California in North America.

In effect, it is from these countries that important forest species, such as the eucalyptus and acacias, from Australia, *Pinus insignis* and other conifers from California, have been imported into the Mediterranean zone.

On the other hand, Australia and New Zealand have introduced Mediterranean species like *Pinus pinaster*, etc. In addition, the hot and dry climate in these distant countries makes for very similar conditions as regards re-afforestation technique and raises problems for which a joint solution may be found.

It follows that an international collaboration, to be really effective, should, in my opinion, not only include the Mediterranean countries properly so called, but also those which present similar oecological conditions, and consequently similar problems.

The possibility we have of working under the aegis of a world organization like FAO will unquestionably assist us in attaining this collaboration.

ITEMS OF INFORMATION

The exclusive drawings which illustrate this Review are the work of the Italian sculptor Francesco Coccia, *Professor of the Faculty of Architecture at Rome University, and Ministerial Councillor of Fine Arts in the City of Rome. He won the competition for the monument to be built in honour of the martyrs of the Ardeatine Caves near the Appian Way.*

NUTRITION

The food situation in Luxembourg

(*Abstract from the Annual Luxembourg Report presented to the FAO Conference* 1948).

In 1948 the consumption level improved appreciably in Luxembourg, rations having increased from 2100 calories in 1946-47 to 2300 in 1948 (before the war the average ration amounted to 3000 calories). For 1949, it is anticipated the ration will attain 2650 calories.

As a result of rationing and the general fairly adequate buying capacity of the population, differences between the consumption levels of the different classes are slight, while before the war they were more marked.

The quantities of protective foodstuffs available remained below prewar but, however, were sufficient to meet minimum requirements.

Because of the long years of rationing, a change has taken place in the consumption of the different foodstuffs. In 1948, the consumption of butter continued to increase while that of meat seemed to be stable at 65 per cent. of the prewar level.

No cases of malnutrition were reported by the Public Health Office in 1947-48. There was a slight diminution in resistance to disease causing greater frequency in some children's ailments.

The major handicap to greater improvement in alimentation was the shortage of cereals in 1947.

Free consumption of whole milk has slightly increased. In March 1948, meat was derationed, and in June, lard, margarine and Italian pastes. On 1 June, only bread, flour, rice, butter, salad oil and sugar were still rationed.

During 1947-48 measures were taken to maintain and improve the alimentation of the people according to the recommendations of FAO, namely : (*a*) compulsory and exclusive delivery of all wheat and rye crops for human consumption ; (*b*) use of diluents in breadmaking (10 per cent. barley) ; (*c*) high extraction rates (85 per cent.) for breadgrains, as recommended at the Paris Cereals Conference in July 1947 ; the same extraction rates to be effected throughout the year 1947-48 ; (*d*) Compulsory delivery to the dairies of all milk produced and not utilized on the farm ; maintenance of prices for slaughter calves at a fairly low level in order to stimulate milk supplies ; (*e*) Free distribution of milk in the schools in large centres ; (*f*) improved legislation concerning livestock health conditions ; (*g*) setting up by the Public Health Office of regional services of medical inspectors and nurses for the supervision of the people's diet. This last measure is to compensate to a certain extent, the absence of an organization dealing with nutrition problems.

Categories of consumers in Czechoslovakia

(*Abstract from the Annual Czechoslovak Report presented to the FAO Conference* 1948).

The total number of population registered for food rationing in Czechoslovakia ranged in 1947-48 between 12,170,000 and 12,325,000.

The consumers in Czechoslovakia are divided into four main age groups of from 0 to 6 years, from 6 to 12 years, from 12 to 20 years and over 20 years. Within the division of population into the age-groups further differentiation is made taking into account whether they are producers of agricultural products, according to the amount of physical work they do, with regard to special physiological requirements of the consumer or his special character.

There is a special category of self-suppliers, who produce their own grain, milk, butter, meat and fats, eggs and potatoes.

Special rations are given to pregnant women and nursing mothers, to sick people in ambulatory treatment (especially those suffering from diabetes, tuberculosis, etc.).

Consumers engaged on heavy physical work or on work dangerous to the health form priority groups of heavy workers, very heavy workers, miners and iron workers, workers working in heat and dust, auxiliary agricultural workers, short term working brigades, workers in food industries, those working with infectious diseases or poisons, nurses in tuberculosis hospitals, social workers, medical workers and nurses in tubercular sanatoria and blood donors.

Special attention is given to school-feeding, works canteens and camp kitchens.

O The monthly bread ration in July 1947 for a normal consumer was 14 kg. The situation in cereals became critical as soon as the consequences of the bad drought on the cereal harvest of 1947 were obvious. For this reason the bread ration was decreased in September to 10.5 kg. and in November to 8.5 kg. During this period also a higher extraction rate was considered necessary, together with the admixing of barley, soya and maize flour in bread. The situation in bread cereals was finally settled by imports of cereals especially from U.S.S.R. This also enabled an increase of bread rations to normal consumers by 1 kg. in March and by a further 1 kg. in April. The bread ration for a normal consumer in June was 10.5 kg., for the age group of 0 to 6 years, 5.5 kg., for the age group of 6 to 12 years, 10 kg., for the age group of 12 to 20 years, 12.5 kg., for heavy workers, 13.5 kg. and for very heavy workers, 15.5 kg.

It is expected that in 1948-49, an increase of stock will first be considered before any changes in the rations are made.

O The meat ration for normal consumers in July 1947 was 1,500 g. of meat per month. In the second half of the year 1947 deliveries of cattle and pigs to the slaughterhouses in consequence of drought was much higher than those set by the quotas. All steps were taken to preserve the meat surpluses for the summer months of 1948 by canning and chilling the meat and by other methods, nevertheless it was necessary to increase the meat ration for normal consumers to 2 kg. In January this was reduced to 1.75 kg. and in February to the original ration of 1.5 kg; later, to keep the meat ration at the same level, more cattle, meat and meat products had to be imported. The meat ration was partly substituted by canned fish and eggs. Fish, which has been off the ration all the time, has been a much appreciated addition to the meat ration. Imports of fish, especially of sea fish, were much increased in 1948. Poultry, both local and imported, was issued against meat cards in an appropriate relation.

In June 1948 the meat rations were as follows: 0 to 6 years 700 g., 6 to 12 years 1,400 g., 12 to 20 years 2,000 g., normal consumers 1,500 g., heavy workers 2,500 g. and very heavy workers 3,500 g. Self-suppliers received a ration of 4.2 kg. including 25% of fat.

O The total fat ration in June 1947 amounted to 780 g. (including 60 g. of butter, 240 g. of pig fat and 480 g. of margarine). The ration remained at this level for the whole year but there were changes in the quality of the fat ration. After two months, the butter ration was stopped and the pig fat was reduced first to 160 g., later to 120 g. till it too was stopped in May.

The fat rations for other groups of consumers underwent similar changes. Children under 6 years were receiving the full butter ration except in January, February and March when part of the butter had to be replaced by pig fat. The 6 to 12 years age group not only received a qualitative improvement by an increased butter ration but the quantity too was increased by increasing the ration of margarine to 745 g. as also with the 12 to 20 years age group. Fat rations for heavy workers remained at very much the same level. The self-suppliers' butter ration was 300 g.

This shows that artificial edible fats still form the basis of the fat ration. Only 14% of the artificial edible fats are covered by home production.

The present ration may be guaranteed even for the year 1948-49 because of the imports of raw material for the production of artificial edible fats and by Czechoslovak production of butter and pig fat.

O There was a considerable decrease in milk production in the year 1947 which was felt already in the opening months. The production figures during the summer and autumn months were very unfavourable. This drop in milk production was in direct connection with the great shortage of feedingstuffs. As a result of this not only milk yield but also the quality of the milk delivered suffered greatly. Only the beginning of the year 1948, with higher feedingstuffs imports, signified a turning point.

O The sugar production in 1947 reached only 48% of the amount planned. To enable the export of sugar, so important for Czechoslovakia, it was necessary to reduce the sugar ration, which was, up to October 1947, 1,500 g. for all normal consumers, to 1,200 g.

O The 1947 harvest of the main crop of potatoes suffered greatly from the bad drought. The total yield amounted only to approx. 50 % of the 1946 harvest. Although a considerable quantity of potatoes was exported in the previous year, it was necessary to put potatoes again on the ration in October 1947.

O The care for the quality of the food and the education of the consumers for a correct nutrition devolves on the one hand on the following authorities : the Ministries of Food, of Education, of Agriculture, of Health and of Information and on the other hand, on the Society for Rational Nutrition. About 500 women teachers of domestic science and specialized teachers of cooking were trained in special classes and afterwards spread the latest experience in correct nutrition in schools as well as in popular classes in the town and in the countryside.

Czechoslovak five-year nutrition plan

A Bill unanimously passed by Parliament on 28 October 1948, has determined Czechoslovakia's economic activities for the years 1949-1953. It covers all sections of production as well as social and cultural activities, and gives the Government broad powers to implement its provisions. The planned investments will amount in 1953 to 80,000 to 90,000 million Czechoslovak crowns (1,600 to 1,800 million U. S. dollars). An analysis of the Bill in *Vyziva Lidu* (People and Nutrition), No. 10, October 1948, includes an account of its programme from the nutritional point of view. Below is a summary of this account.

The 1947 agricultural output was heavily impaired by drought which made it impossible to fully realize the agricultural targets of the first Two-Year Plan for 1947-48. The losses - estimated at 15,000 million Czechoslovak crowns (300 million U. S. dollars) necessitated unforeseen imports, which included 354,750 metric tons of bread grains and 15,180 metric tons of meat. The cost of all foodstuffs imported in the second half of 1947 and first half of 1948 amounted to 7,500 million Czechoslovak crowns (*i. e.* 150 million U. S. dollars) more than the cost for the corresponding period in 1946-1947.

These circumstances had to be taken into consideration as a starting point for the working out of the Five-Year Plan, as regarded agricultural production and the food processing industry.

The main feature of the Five-Year Plan in agriculture is a marked shift from plant production towards animal production, even at the cost of the eventual necessity of importing bread grains. The present ratio of plant production to animal production, *i. e.* 65 and 35% is to become 52 and 48% at the end of the Five-Year Plan.

In food processing, the following production increases are foreseen : sugar, 17 % ; alcohol, 6% ; malt, 186% ; beer, 48% ; On the other hand, milled products will reach only 91% of the present level at the end of the planned period ; the extraction rate will be gradually reduced from 80 to 75%. Investment policy in the food industry will aim at the following objectives : saving of labour in households and work canteens through marketing of finished or semi-finished foods of good quality and which satisfy the hygienic standards in force.

The Five-Year Plan estimates that the total food consumption of 1953 will exceed that of 1948 by :

67,200 metric tons of fat ;
289,200 » » of meat ;
206,000 » » of sugar ;
193,000 » » of wheat flour ;

22.5 million hectolitres of milk (including dairy products calculated in milk units).

1,000 million eggs.

Vitamins and preserved eggs

(Abstract from *Annali della Sperimentazione agraria*, Ministero dell'Agricoltura e delle Foreste, 1948, Vol. II, n. 4).

Interesting experiments have been carried out at the Milan Low Temperature Station on the vitamin content of eggs according to the method by which they are preserved.

Three experimenters — G. Antoniani, L. Federico and M. Missiroli — studied eggs which had been preserved by the so-called lime process, *i. e.*, immersion in a saturated solution of $Ca(OH)_2$ at a temperature of + 2 to +3°C. ; eggs kept in cold storage at 0° C. and 80 per cent. atmospheric humidity ; eggs preserved by the stabilization method, *i. e.*, by storage in an artificial atmosphere of 95 per cent. nitrogen and 5 per cent. carbon dioxide at a pressure of approximately 250 mm. water at a a temperature of + 1° C.

The yolk and albumen of the eggs contain vitamins B_1, B_2, D_2 and E.

It was found that lime preservation does not alter the vitamin B_2 content of the yolk, even after 5 months immersion. There is a considerable loss in this vitamin with the stabilization process and it is even more marked in cold storage eggs.

Compared with the average vitamin B_2 of the yolks of fresh eggs, there was a loss of 20 per cent. of this vitamin in lime preserved eggs, while for cold storage eggs, the loss was insignificant and there was practically no change in the vitamin B_2 content of the albumen. No loss occurred with the stabilization system.

The three methods of preservation do not affect, to any practical extent, the vitamin D_2 content of the yolk.

On the other hand, there is an appreciable reduction in vitamin E attaining as much as 50 per cent. with all three methods of preservation.

AGRICULTURE

Agricultural census in Belgium

(Abstract from the Statistical Bulletin of the Belgian Ministry for Economic Affairs)

The trend in the development of the different crops and livestock numbers can be seen from the provisonal results of the census taken on 15 May 1948. The total area cultivated in 1948 amounted to 1,720,587 ha. as against 1,735,004 ha. in 1947

(A) In the cereal and starch crops group, winter and rotation wheat increased by 81,108 ha. and spring wheat diminished by 15,867 ha., compared with last year.

In 1948, rye covered more or less the same area as in 1947, oats dropped from 230,195 to 188,748 ha.

Sugarbeets decreased by 7,033 ha. — 13 per cent. — while flax increased by 2,133 ha. or 7 per cent.

Gramineous forage crops decreased by 9,693 ha. (11 per cent.), pasturage increased from 777,716 ha. in 1947 to 784,869 ha. in 1948, an extension of 7,153 ha. or 9 per cent.

(B) Livestock — The total reduction of 23,631 head registered for horses refers to 11,358 farm horses and 12,273 other horses.

Cattle were found to total 1,713,951 head as against 1,729,453 in 1947. The number of milch cows increased by 12,821.

Pig stocks increased by 41,605 head, sheep decreased by 23,506 head and goats by 12,064.

(C) Farm tractors.

The tractors employed for farm operations, not including the tractors used exclusively for threshing, numbered 2,861. The census also reported 494 power cultivators and 1,075 jeeps for farm use.

French Annual Food and Agriculture Report and FAO objectives

The French Ministry of Agriculture published in 'Etudes et Monographies' the Annual Report on the 1947-48 food and agriculture situation in France *.

This Report covers three sectors: France, the Saar and the French Occupation Zone in Germany; the French overseas territories are divided into three sections. Owing to limited space, only the main features of the sector dealing with France will be given in this number.

The first chapter is a brief summary of the agricultural situation including data on the food standard of the population. It has been found that there is a general increase in consumption (calories, proteins, lipids, vitamin A, vegetables, fats, meat, fish and eggs). On the other hand, milk and bread rationing has been made stricter (only children under 4 years can obtain a regular milk ration). While as regards bread, besides falling off in quality — bolted at 98 per cent. instead of 85 per cent. — the ration has also been reduced. There was an arrest in the considerable improvement in food standards observed in 1945-46. In some towns, the persistent poor growth of the school children appears to be due to:

— unbalanced diet owing to the high price of foodstuffs on the free market (especially meat);

— reduced milk rations (in 1946, milk was distributed to children under 13 years);

— influence of the reduced bread ration on the family budget.

The present agricultural situation is briefly reviewed. The prospects for the 1948-49 crop year are as follows:

August 1948 — *July* 1949.

The 1948 crops had a better aspect than those of 1947. In effect, the area under practically all the crops has increased over that of the preceding years, particularly 1947. In addition, owing to favourable weather conditions, good harvests can be expected for most crops.

Wheat — Area cultivated ranges about 4,300,000 ha.; the harvest is estimated at over 70 million quintals. *Coarse grains* — in 1948, practically the same large area as in 1947. Yield expected to be very high corresponding to that of the good prewar years. *Potatoes* — area at least equal to that of last year, weather conditions favourable but the inferior quality of the seed potatoes will undoubtedly affect the yield. *Sugarbeets* — fairly marked increase in area, almost the same as before the war; crop in good condition, good yields expected if summer not too dry. *Oil-yielding crops* — area below 1946, average harvest expected. *Pulses* — no change in area but very good harvest likely, at least of beans. *Fresh vegetables* — probably the same area, impossible to estimate yields. *Grapes* — no change in area, growth vigorous and good formation of bunches promise a good crop. *Fruit crops* — autumn harvest not good, middling crop of apples and pears. *Forage crops* — area unchanged, but weather conditions favourable. Fairly large fodder stocks for the

* No. 8-9-1948 - "Revue du Ministere de l'Agriculture" Paris.

1948-49 winter. *Animal production* — the expected good forage crop will permit renewing efforts to increase livestock numbers, especially cattle, after interruption in 1947.

Foodstuffs, seeds, feedingstuffs, fertilizers, etc. are also increasing. There has been a slight improvement in draft power and farm machines.

The shortage of manpower has become more pronounced with the departure of the German prisoners. In this section of the Report, the trend in consumption, imports and prices is also reviewed. In 1948 there was a shortage in supplies of breadgrains, sugar, fats, meat, milk, cheese and wine, with a higher consumption than prewar of potatoes and, in the towns, of fish. Rice was reserved for children up to 4 years old. Two short chapters deal with forestry and forest products and fisheries ; these are reported in the respective sections of this bulletin.

The second part of the Report is particularly interesting since it treats on " the measures taken and contemplated with a view to accomplishing the objectives of FAO ".

One of the first steps was to endeavour to improve food standards by revising, on the one hand, the consumer groups and, on the other, by derationing a large number of foodstuffs, in paritcular, meat and wine. Supplies and requirements were investigated for the utilization of the available foodstuffs. In the case of cereals, a compulsory extraction rate has been fixed ; inspection of the flour is effected by the flour distribution association, and in the bakery by officials of the same body. Special measures have been taken for the admixture of substitutes.

Potato stocks are sufficient to ensure normal supply despite the increase in consumption caused by the reduction in bread rations. During the between season period, only small quantities needed to be imported to " increase supplies and eventually bring down domestic prices " Measures were also taken to improve stocks and stabilize the prices of pulses.

A sugar program has been drawn up, aiming at raising beet cultivation to the prewar level, which will permit covering the requirements of all the territories of the French Union. Beet prices have been revised in order to encourage planters.

In the opinion of nutrition experts, the meat ration was too low. The desirable ration would necessitate an annual production of approximately 1,840,000 tons (figure not even attained before the war — 1,710,000 t.).

Ideal theoretical ration according to physiologists	per caput	126 grams
	per year	46 kg.
Amount consumed before the war, including family consumption	per caput	115 grams
	per year	41 kg.
Ration consumed in 1947, including family consumption	per caput	100 grams
	per year	36 kg.

For 1948 supplies were estimated at 1,535,000 tons (a difference of 200 to 210,000 tons between production and imports to be covered). The rationing system keeps the butcher-shops closed several days a week. A cold storage system was planned (national meat purchased during the peak period) and pig fattening contracts were concluded with producers (pigs delivered on given dates and at fixed prices in exchange for stockfeeds at official rates). Measures for fixing prices concern wholesale and retail pricing, priority purchases, reduction in number of purchasers by establishing the buyer's licence, sale of frozen meat at lower prices, model shops. On the whole, these measures have checked inflation.

The renewal of free trade in fish (25 March 1948) resulted in increased consumption, upsetting the balance between requirements and supplies of national fish, which will have to be supplemented by heavy imports of fresh and frozen fish.

With the contribution of North Africa, the home country, in a normal year, can meet its requirements in vegetables, except for imports to cover shortages of late season vegetables. The consumption of fruits, on the contrary, exceeds production means. Children alone are entitled to the rice ration, but no distribution from October 1947 to April 1948 was possibile owing to insignificant domestic stocks and rise in price of the imported product following devaluation.

Before the war, wine consumption amounted to 49 million hectolitres, the stocks of the present vintage are 29,690,000 hl. There are no restrictions on sale. To increase supplies, imports have been effected or are expected from Algeria, Italy, Spain, Greece and Portugal. Steps have also been taken to fix prices. An endeavour has been made to increase supplies of fruit juices by imports. No change as regards cider but increase in beer production.

In the first quarter of 1948 fat rations were the same as in 1947 and maintained in the 2nd quarter; estimates for the 3rd quarter are not possibile as it is not known what credits will be allocated to this supply sector. Consumption should not be less than 70 per cent. of prewar. In order to improve this sector, the producers have been given long term price guarantees. Before the war, fat production was insignificant ; in 1948 it amounted to 120,000 tons. The suet problem is connected with the meat problem.

Special programs were established for hospitals, sanatoria, preventoria, office canteens, holiday settlements.

Food organizations and national committees have been set up. The two most important besides the Public Health Office and the National Health Institute are : the National Centre for the Coordination of Food and Nutrition Studies and the Research and the Scientific Food Hygiene Association. The first mentioned organization set up a Central Electrophoresis Station in 1948, and planned the establishment of a Centre for research on the human, normal and pathological physiology of nutrition, in Strasburg ; it drafted a program for an international conference in Lyons on antivitamins, and at the beginning of 1948 gave eighteen lectures on topical questions of interest to nutrition experts. This National Centre publishes the Annals of Food and Nutrition. The second organization deals with research on the action of vitamins and the effects of malnutrition, investigations on working families in the Paris region and on nutrition in French Equatorial Africa. Courses and lectures are given and a bimonthly bulletin is published.

In chapter B of this second part, the expansion and readjustment of agricultural production and improvement in yields are examined, and consequently, (1) developments and discoveries in research and instruction, and agricultural advisory services — (2) increased activity and intensive propaganda as regards disease and pest control for crop protection, and veterinary sanitary measures with, *inter alia*, the establishment of an institute for foot-and-mouth disease vaccine, subsidized and controlled by the State — (3) improvements made in power agriculture and in farm equipment where much remains to be done (there are about 65,000 tractors now in use as against the 200,000 figuring in the Monnet Plan). Land consolidation and land reorganization need to be increased. Drainage, irrigation, soil improvement operations, a rural road system are in progress, and cooperatives for the use of farm equipment are being set up. The funds for rural electification and equipment are covered by subsidies from the Ministry of Agriculture and local loans. In addition, two laws of 7 January 1948 provide for the establishment of a 'National modernization and equipment fund' for both agricultural and industrial needs.

Improvements have already been made or are proceeding in processing plants (canneries, sugar-mills, oil works, vintneries, chocolate factories, etc.) and in marketing (standardization of agricultural produce raw or processed, packing, quality, optional national brand, etc.).

The efforts being made in the different branches tend to augment the importance of the cooperative movement in French agriculture and to facilitate its modernization. There are three groups of cooperatives : for threshing, motorized farm operations and the use of various implements. This organization for the utilization of farm equipment comprises 70 departmental federations and one national federation ensuring the protection of the farmers' interests and the development of the movement, and which is supplemented by the National Union for the execution of economic projects. The agricultural mutual Credit plays a cardinal role in rebuilding the agricultural potential. In general, loans are reserved fot the purchase of essential farm equipment, and increasing production, and priority is granted to young farmers not long started, to war victims and small farmers. Short-term loans and incentive bounties are accorded for different crops and are also being planned for rural housing. An agreement between the National Agricultural Credit Bank and the National Modernization and Equipment Fund is being prepared.

The agricultural labour situation is unsatisfactory. The rural exodus, the departure of the German prisoners and the limited foreign immigration have made it necessary to take various measures (full-time employment, improved standard of living, increased wages, etc).

There have been no recent changes in the land system. The 1946-47 Statute for farming leases resulted in eliminating the system employed by the lessee which exhausted the soil.

The measures taken with a view to extending the cultivated area and increasing yields aim at obtaining economic conditions favouring increased cultivation of staple crops ; compulsory cultivation of certain crops ; supplying the farmers with the equipment for intensifiying production ; improving the methods adopted by the farmers.

The measures taken and contemplated for the improvement of livestock comprise selective cattle breeding, milk recording, artificial insemination centres (in June 1948, 24 centres were operating on a cooperative basis with about 100 bulls registered in the Herdbook, corresponding to a minimum artificial insemination potential of 150,000 cows).

To enable the farmers to cultivate a larger area to essential crops, they must be given the necessary equipment and their interests should be coincided with the improvements planned.

To obtain a better utilization of the products and increased food supplies, an endeavour is being made by means of pooling, and issuing ration cards to reduce waste and loss and to utilize minor products which can be employed for human consumption.

The fixing of prices for each product has also been studied.

An attempt is also being made to improve the standard of living in the rural districts (housing, community centres, social and accident insurance, family allowances, maternity grants, prenatal care, holidays with pay, working hours, etc.).

Forestry and fishery activities following the recommendations of FAO are examined in the respective sections of the Bulletin.

In part III of this Report, the problems requiring the adoption of new measures are studied. Many problems — shortage of fertilizers and stockfeeds, labour — cannot be solved, at least in the near future, without assistance from abroad. The French Government, however, is fully aware of the progress which could be obtained by increased international cooperation : it has already contributed to this end and is prepared to support all efforts aiming at increasing production and improving the distribution of foodstuffs.

Hungarian agricultural production

(*Abstract from the Information Bulletin of the Hungarian National FAO Committee No.* 6, 1948).

The last report of the Ministry of Agriculture states that cereal production attained 22.5 million quintals, exceeding the prewar output. The barley yield amounted to the average for the five years preceding the war. The yield in root crops was also higher than that for the period 1934-38, in maize [37 per cent., potatoes 20 per cent. and sugarbeets 70 per cent. higher. The yield of other field crops also attained the prewar level, except for peas, lentils and flax. The output for rice and heliotrope was excellent. Before the war, no rice was cultivated, while at present, domestic production already exceeds 60 per cent. of the quantity imported for the requirements of the country. The production of heliotrope, which has developed since the war, is 13 times greater than in the years prior to the war.

Replanning of mountain pasture in South Italy

Mr. T. W. White, FAO pasture specialist now engaged in field work at the FAO Regional Office for Europe in Rome, reports on two instances of planning of mountain pasture in South Italy. The first survey deals with a privately owned 400 ha mountain ranch in the Commune of Torre di Ruggero. The ranch lies at an elevation of 900 meters and consists of 100 ha. woodland, 120 ha. cultivated land principally corn, rye and wheat and the balance in brush pasture. The owner runs 160 head of sheep and goats in the summer, which in the winter he takes down to the lowland.

Mr. White's survey reveals that much of the farmland is on steep slopes and that the elevation is too high and consequently the season is too short for good grain production. July and August are usually dry. The maintenance of succulent pasture during this period requires some supplementary irrigation. Approximately 200 ha. are suitable for permanent pasture and approximately 100 ha. are suitable for pasture rotated with forage crops. Springs to irrigate the land are available. About 50 acres of this mountain farm can be irrigated if the land is cleared and cropped for 2 years and planted to permanent and rotated pastures.

After these facts had been ascertained by Mr. White he proceeded to replan this mountai farm as a year-long stock farm. Here are the main recommendations : establishment of 15 acres of permanent irrigated pasture by 1951 and development of irrigation for an additional 25 to 30 acres through the construction of catchment basins below the springs with canals leading to the permanent pasture and the fields. 20 acres of brushland will be cleared for forage crops and 15 acres of land which are now cultivated will be converted to permanent pasture as a part of the demonstration, and the initial step in the pasture development program.

The plan also stipulates the development of windbreaks by planting shrubs and trees on the windward side of the pasture and buildings. The construction of an open-front sheep-shed and a ten stall shed for milking cows is also projected as the initial part of the building construction program. The owner will erect additional sheds and barns as more pasture for livestock is established.

The proprietor eventually plans to maintain 75 head of cattle and 200 sheep once sufficient forage and pasture acreage is established. Under the Lire Fund program, a fund which was started by UNRRA and which FAO now controls, the Forestry Corps will pay about 50 percent of the initial cost and the owner will contribute the balance in making the initial demonstration.

The program outlined for this mountain farm is regarded as a demonstration for this farming area of the sort of improvements which will give the proprietor greater returns and at the same time will preserve the soil. The owner will complete this program on his own responsibility once the initial demonstration work is complete. The planned conversion of all the brush-pasture to cultivated crop land, and the seeding of lands now cultivated to permanent pasture, as well as pasture to be grown in rotation with hay and silage crops will be a gradual change in type of farming and will require eight to ten years.

The cultivation of steep slopes as found on this farm without livestock to supply manures is a soil depleting type of farming. The soils of the farm when converted to a pasture-forage-livestock basis will gradually improve in fertility, and soil losses due to erosion of steep slopes should be eventually entirely eliminated.

The second survey was undertaken at Macchialonga near Fossiata-Cosenza. This too is a mountain pasture of 300 ha. owned by the state and leased to livestock men. The survey showed that pasture forage was only in poor to fair condition but it also revealed that the yield of pasture forage could be materially improved by constructing fences, by installing water facilities for the livestock, by control of brush and weeds, and reseeding depleted areas, and by the application of improved management practices. The physical improvements projected consist of 6 kilometres of fence and 700 meters of pipe line leading from a large spring to three watering troughs in the distant parts of the pasture in order to reduce travel and trailing by grazing animals. Brush and weed areas are scheduled for treatment and the swampy parts of the pasture drained. It is also recommended to reseed 50 ha. of badly depleted pasture.

New management practices are planned, so that the several units of the pasture would be grazed in rotation ; one unit of which would be deferred each spring and the degree of grazing limited to that which would allow the forage plants to regain full vigor and yield. Physical improvements and changes in management practices are scheduled for application during the coming three year period. Estimates of potential pasture forage production indicate that 75 to 80% improvement in yield may be expected when all improvements are made, and improved practices are being fully applied.

DISTRIBUTION

Rice distribution

An appeal for deferment until next year of shipments of rice to Europe under the 1948 allocation program amounting to 172,250 metric tons has been sent to participating exporting and importing countries by the Rice Committee of the FAO's International Emergency Food Committee.

The appeal is based on the probable shortfall of 150,000 metric tons which may occur in shipments from Southeast Asia, source of nearly three fourths of the world supply recommended for export. The appeal is made so as to conserve as much rice as possible for consumption in the Southeast Asia countries where rice is the principal food. An additional allocation of 120,000 metric tons of rice to these Asiatic countries has been made to partly offset the probable rice deficit ; this amount is expected to be covered partly by the result of this appeal for deferment and partly by additional shipments from various countries. It is of interest that a total shipment of 50,000 metric tons of rice from Italy is foreseen for India, Ceylon and U. K. territories in Southeast Asia. It was also recommended that Italy should be authorized to ship small lots of rice totalling 10,000 tons to European claimants. These shipments would come out of Italian home consumption supplies, rather than from an export surplus. This is the first year since the war when Italy has had rice for export.

In addressing the appeal to the sixteen European countries or areas holding 1948 rice allocations, and to the nine exporting countries involved, the Rice Committee made it plain that it was asking only for delay in implementing the 1948 program, and not for outright cancellation. Committee Members agreed that delayed shipments could be made during the first half of 1949 without prejudice to any rice which might be made available to Europe under the 1949 allocation program.

Until this year, no rice at all was recommended for allocation to Europe, except from sources in Europe itself, or in Iran. This policy was based on a feeling, shared in by the European countries themselves, that the Asiatic countries where rice is the 'staff of life' had first claim on acutely short supplies. A limited departure from this policy, resulting in the 1948 'token' distribution, was agreed to when governments of rice-producing countries gave assurance that a limited re-opening of the European market would stimulate overall production and imports.

IEFC de-allocates coarse grains and rye

Immediate de-allocation of coarse grains and rye was approved by IEFC on the recommendation of the IEFC Cereals Committee.

The principal coarse grains are barley, oats, and corn.

Wheat continues under 'block' allocation for the balance of the cereals year ending 30 June 1949. Under a 'block' allocations system, the sources from which importers are to obtain their supplies are not indicated . Suppliers are free to ship to any importer holding an allocation, up to the limit of that allocation. Similarly, an importer is free to buy from any source, up to the limit of its allocation.

IEFC Interim Cocoa Allocation

An interim allocation of 446,390 long tons of cocoa beans for the cocoa year beginning 1 October 1948 has been proposed to participating governments by the International Emergency Food Committee of the FAO Council.

The recommendation covers 75 percent of the 1948/49 estimated world export supply of 600,000 long tons of cocoa beans.

A final allocation will be recommended early in 1949.

Allocation of protein feeds ends 31 December 1948

Allocation of vegetable high protein (animal) feeds ended as of 31 December 1948, and the IEFC Committee on Feeds will be discontinued at that time.

The decision was based on two main considerations: First, it is probable that larger exports of oilcake and oilseeds will be available. Secondly financial conditions are likely to limit demands to the estimated availability of physical supplies.

Discontinuance of the Committee will leave IEFC five active commodity committees on Cereals, on Cocoa (located in London), on Fats and Oils, on Nitrogenous Fertilizers, and on Rice.

For the balance of the present calendar year, the Committee has recommended that countries limit liftings of vegetable high protein feeds (oilcake equivalent) to approximately 100 per cent of 1947 liftings or allocations.

IEFC de-allocates flaxseed and linseed oil

Immediate removal of flaxseed and linseed oil from the list of commodities under international allocation was announced by the International Emergency Food Committee of the FAO Council.

The action was taken on the recommendation of IEFC's Committee on Fats and Oils. Allocations will continue to be made for the other oilseeds, fats and oils.

Stimulated by the acute postwar shortage of linseed oil, production of flaxseed was greatly increased, particularly in the United States, Canada, and Mexico, in 1947 and 1948. The situation has now developed to a point where it is clear that the bumper 1948 flaxseed crops in North America, together with prospective new crops and carryover in South America, promise a world supply for the 1948/49 marketing year in excess of what appears to be effective demand under prevailing procurement conditions in the importing countries.

This situation has brought linseed oil and flaxseed, from which the oil is derived, within the IEFC policy of de-allocating commodities when the current supply appears to be sufficient to meet effective demand. It was upon that basis that the decision calling for immediate de-allocation of flaxseed and linseed oil was reached.

ANIMAL PRODUCTION

Livestock production in Poland

(*Extract of the Annual Report of Poland to the Annual Conference of FAO* - 1948).

In Poland, 5 artificial insemination stations have been established, milk control action has been organized (41,000 cows under control in 200 control circles).

The number of incubators has been increased during 1947 from 107 to 143 increasing their capacity from 574,000 eggs to 714,000; the number of thorough bred chicks distributed has been increased from 283,000 to 472,000.

Utilization control has been established, as also pedigree books, rationalization of breeds, qualifying of boars, establishing of insemination stations.

The increase of the number of cattle, swine and sheep in accordance with the natural process of rehabilitation (with the exception of horses the number of which increased as a result of imports) is a result of the carrying out of the above-mentioned action and a broad veterinary services action.

In the sphere of State veterinary activities a notable achievement in the combating of diseases must be mentioned; communicable diseases of animals increased greatly during the war. This is true especially of glanders, dourine, foot-and-mouth disease, swine erysipelas and hog cholera. The State Veterinary Institute produced over 23,500 litres of vaccine in 1947.

An illustration of the size of this action can be had from the fact that 2,500,000 pigs were inoculated against swine erysipelas. State and Government veterinary centres have been established.

Animal production in Czechoslovakia

(*Extract of Annual and Progress Report of Czechoslovakia to the Annual Conference of FAO* 1948)

The numbers of cattle started to go down before the most serious effects of the drought in 1947 were generally felt. The losses in 1947 amounted

to 700,000 head, representing 18% of the total number. The number of cows was decreased by 175,000 head representing almost 9% of the total. The first half of the year 1948 brought some improvements ; the numbers of cattle increased during this period by 175,000 head and the numbers of cows by 43,000. Compared with the average from the years 1934-38, the numbers of cattle are now about 20% lower.

On 1 January 1947 the highest post-war pig number was reported. Since that date the numbers of pigs are constantly decreasing. In the year 1947 a drop of 380,000 pigs occurred, including 86,000 sows, *i e.* almost a 13% decrease in pig numbers and 23% decrease in the numbers of sows. In the first half of the year 1948 an improvement was noted. The numbers of pigs increased by 93,000 head and the numbers of sows by 98,000, representing 3.6% and 20% respectively. The increase in the numbers occurred mainly in the younger age groups. As compared with the pre-war average the number of pigs was lower by 516,000 head representing almost 17%.

The number of horses at the beginning of the year 1947 almost equalled the pre-war average. During the year the number of horses dropped however by 25,000 representing approximately 3% ; the first half of the year 1948 brought an improvement of approximately 1%.

The numbers of poultry show a tendency to increase. Numbers of hens and cocks increased in 1947 by 1,064,000 representing almost 11%. Under favourable conditions further increases in the numbers of poultry are expected.

MILK AND MILK PRODUCTS

Butter and cheeses in Italy

(Comunication from the FAO Italian National Committee).

Before the war, Italian butter production attained 447,000 qls. In 1946, it hardly amounted to 380,000 increasing to 470,000 qls. in 1947. Butter production is localized chiefly in the Po Valley and more especially in the provinces of Cremona, Milan, Mantua, Parma and Reggio Emilia. The manufacture of margarine is prohibited in Italy in order to prevent undesirable competition. The price of butter from 1937 to 1947 has increased approximately 100 times.

Domestic consumption amounted to approximately 500,000 qls., corresponding to 1.20 kg. per caput. Butter was strictly rationed during the war. After the war an endeavour was made to increase rations by imports, and consumption per caput attained 0.8 kg. rationing was abolished. In 1947, the consumption figure stood at 1 kg.

Butter imports before the war (1934-38) averaged 10,000 qls. and were obtained chiefly from Hungary, Argentina and Czechoslovakia. Average exports were reported as 5,000 qls.

Prior to the war, Italy produced over 2,229,000 qls. of cheese (industrial census 25/5/1937). With the war this production fell to 1,500,000-1,600,000 qls. In 1947, it had increased to 2 million quintals.

Cheeses are made from cow's and ewe's milk. Cow's milk cheese is produced mainly in the Po Valley, provinces of Lombardy and Emilia, while 'pecorino' is made in the Tuscan Maremma, Agro Romano, Apulia, Calabria, Sicily and particularly in Sardinia. With the cost of living being 60 times higher in 1947 than in 1937-38, the price of cheese has increased 100-110 times over the prewar figure. The quantity available on the home market before the war amounted to about 2,180,000 qls., corresponding to a consumption of 5 kg. per caput ; after the reduction during the war, consumption rose to 4.2 kg per caput in 1947.

Italy is an exporter of cheese, especially grating cheeses. Exports before the war averaged approximately 240,000 qls. and were directed mainly to the United States, France and Great Britain. In 1946-47, exports were again authorized, but on a reduced scale. Swiss and Dutch cheeses are imported on a small scale. Export and import figures are as follows :

	Imports	Exports
1946	8,100 qls.	8,279 qls.
1947	20,113	15,895
1948 (up to July) . .	12,606	24,086

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In No. 7 of this Bulletin on page 573, we brought an account of the Report of the Williams Committee on Milk Distribution in England. A new legislative measure is under consideration with a view to safe- guarding high standards of hygiene in milk distribution. In No. 474 of the Bulletin of the Ministry of Food (November 29, 1948) information is given that the Milk (Special Designation) Bill was introduced into the House of Lords on 24 November, 1948. This bill is designed to ensure that milk supplied for liquid consumption in England

and Scotland will conform to the highest standards of purity. If it becomes law, the retail sale of milk will be limited to the classes of milk which are sold under special designations. (T. T. Certified Milk, T. T. Milk, Accredited milk derived from a single herd, Pasteurized Milk and Sterilized Milk).

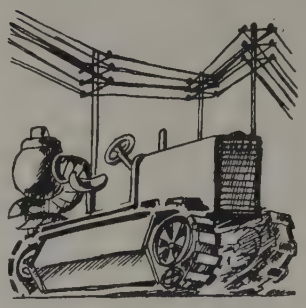
Fresh milk supplies in Switzerland

In an article published in '*L'Industrie Laitière suisse*', organ of the Central Milk Producer's, Union, the author points out the present economic and social disproportion as regards milk supplies as a result of the "undertaking on the part of the Swiss farmers to supply the country with essential foodstuffs before exploiting the favourable trade outlook for the export of Swiss products". He states, however, that

"Although production had increased in the last few months, particularly in October 1948, compared with the previous year, it is far from attaining normal, because the restocking of the dairy herds, which has been progressing well since the end of the war, has again slackened off due to compulsory and large scale slaughterings. Since the number of young stock has also been considerably reduced, production can hardly return to normal before two or three years. On the other hand, consumption, especially of whipped cream, has increased appreciably since rationing was abolished". In addition there is a continual increase in the number of non-producer consumers, hence the difficulty in supplying some large consumption centres.

In the author's opinion, to remedy the anomalies in provisioning, measures such as the following should be taken: fixing the price of milk for consumption according to fat content and standardization; technical improvement in collecting and transporting milk and lastly, extension of availabilities in fresh milk. In this respect, the author notes that in Switzerland the annual consumption of fresh milk per inhabitant averages 220 litres, which represents some 8 million quintals in all, consumption which will continually increase. When production is normal, all the federations can easily procure the fresh milk necessary in their own sectors, but when it is below normal, they have to resort to other sources to meet their requirements and those of sister federations. This milk has to be taken from (*a*) farms under State control; (*b*) cheese-factories managed by private buyers of milk; (*c*) condensed milk and other industrial dairy enterprises. Naturally, these withdrawals interfere with the regular operating of these dairy enterprises; this is the problem which the Swiss dairy industry now has to solve.

AGRICULTURAL ENGENEERING



Agricultural Machinery in the United Kingdom

(*Extract of the United Kingdom Annual Report to FAO*, 1947/48).

It has been the aim to increase output of agricultural tractors and farm machinery, so far as materials allow, both to meet the continuing and heavy home needs, particularly for the agricultural expansion programme of August 1947, and to make an increasing contribution towards meeting the needs of other countries. The results are shown in the following figures.

Value of output of tractors and farm machinery, including spare parts, at ex works prices.

Year	For home use £	For export £	Total £
1946	20,200,000	6,100,000	26,300,000
1947	33,770,000	8,970,000	42,740,000

The above results have been achieved by: (*a*) expansion of productive capacity in accordance with the plans of many manufacturers, carried out since the end of the war. (Agricultural tractor output has risen in 2 years from a rate of 25,000 a year to a rate of over 100,000 a year. Horticultural tractor output has risen similarly from a rate of 8,000 a year to a rate of 38,000 a year); (*b*) increased allocations of steel to the manufacturers; (*c*) Steps to help in resolving production bottlenecks, shortages of components and similar problems.

The agricultural engineering industry's capacity has been reviewed by independent production experts who have in general confirmed that factory and plant are sufficiently available.

Special attention has been given to supplies of spare parts. There is still a shortage of a number of parts, including wearing parts, owing to production difficulties.

Exports are directed by the manufacturers, under the general guidance of the Government, to their overseas markets as fairly as possible, having regard to the needs of various countries, the trade prospects and obligations, and the U. K. balance of payments needs.

Supplies of the machinery in commonest use are now considerably more abundant in relation to demand and should present no major difficulty if production is maintained at present levels. It is in the field of more specialised equipment that the main shortages occur and for some of these items the United King dom remains largely dependent upon imports.

All manufacturers are working on improvements to existing machines, the production of new models, and the development of additional machinery. All tractors now in production are models new since 1944.

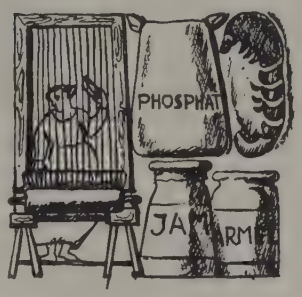
The Agricultural Machinery Development Board and the National Institute of Agricultural Engineering, financed by the Government have continued to help manufacturers by provision of testing facilities, by undertaking research work, and by advising on development, though the extent of the help that can be given is limited by available staff. A post-graduate course in agricultural engineering has been started by Durham University at the King's College, Newcastle, with a view to the training of agricultural engineers. The research and development arrangements are at present under consideration and it has been proposed that the National Institute of Agricultural Engineering should become an independent grant-aided Institute under the scientific supervision of the Agricultural Research Council, instead of being a part of the Ministry of Agriculture, and that an Agricultural Machinery Advisory Committee, including representatives of farming and manufacturing interests, should be set up to advise the Agricultural Ministers.

Advice on farm mechanization and the use of machinery is given by the newly-established National Agricultural Advisory Service or in Scotland by the Agricultural College. Help with work requiring the use of machinery continues to be given to the smaller farmers through the County Agricultural Executive Committees by undertaking contract work or hiring out machinery owned by the Government. Steps are being taken to improve the efficiency and economy of this service.

O The distribution of **means of mechanization** in agriculture of Czechoslovakia in the year 1947 followed the Two-Year plan closely. Over 5,000 tractors as well as binders, mowers, reapers, chaffing machines with blowers, rotary hoes and other machines were supplied. The deliveries of milking machines were under the plan, the deliveries of farm waggons on tires exceeded those planned. It was not possible to fulfil the planned deliveries of lorries for agriculture.

Much importance was attached to setting up new agricultural machinery stations ; in the year 1947, 78 such stations were set up and in addition agricultural machinery cooperatives were founded, of which there are now 1,772.

AGRICULTURAL INDUSTRIES



Meeting on Food Preservation

We give below brief summaries of the many specialized lectures given at the Meeting on Food Preservation which took place in Denmark between 11 and 23 October 1948, as announced in No, 7 :

Dr. H. J. Jerne of Copenhagen, speaking on *Transportation of chilled and frozen products*, described the appearance of frozen meats on Central European markets, and the construction of the first railway truck, two axled, weighing 17 tons, with loading capacity 15 tons, fitted with a Westinghouse brake and pipes for heating the train, making it possible to attach the wagons to passenger trains. He mentioned insulation, 10 to 12 cm. cork or pressed peat plates, with heat transmission approx. 1,200 cal. per 1° C difference between in and outside temperatures in 24 hours. He discussed the use of ice, alone or mixed with salt, for cooling purposes, and mechanical refrigeration as applied to railway transport. Deep frozen products lead to the introduction of containers adapted to fit both 2 and 3 ton railway and motor trucks. He discussed dry-ice which with the help of various appliances can be used to maintain any temperature down to –20°C. At the same time the gas into which the dry-ice sublimates has been found to have a beneficial effect on most perishable foodstuffs.

Mr. A. Banks, Ph. D., of the Torry Research Station, D.S.I.R., Aberdeen, spoke on *The freezing and Cold Storage of Herrings*. After an introduction on the general nature of the problem, and after dealing with ' Fundamental Characteristics of Herring Oil ', ' Effect of Catalysts ' and ' Effect of Common Salt ', ' Glazing ' and ' Drying ', he arrived at the following conclusions :

It seems that temperatures recommended for cold storage of white fish are also suitable for fatty fish. As the human palate can detect changes in the flavour of fat sooner than changes in texture and general flavour of protein, the storage life of herrings for ideal preservation is slightly less than that of cod and haddocks, three months as against four months at -20°C. and six months as against eight months at –30°C.

Special requirements for herrings are — freedom from contamination with salt, which may be caused by mixing the fresh herrings with salt for

preservation purposes, or by dipping them in brine before freezing or by freezing in brine. Pretreatment with salt or brine should be avoided. Brine frozen herrings may be cold stored satisfactorily if the adhering brine is washed off, the surface of the fish hardened by a blast of cold air and then glazed. Kippers, *i. e.*, brined and smoked herrings do not keep nearly as well as fresh herrings during cold storage.

Air-blast or multi-plate frozen herrings will keep well at low temperatures if well glazed before storage. Drying during storage must be avoided.

War-time experience with dried foods containing fat suggests that air exclusion is the best way of keeping fatty foods free from rancidity. Because of the complex nature of fatty components of foods, addition of antioxidants to prevent rancidity is not always successful. Glazing is so effective and so simple to carry out as to preclude the use of antioxidants for frozen herrings. Drying, which can cause a loss of glaze and thereby increase the rate of development of rancidity is a separate problem. Drying during cold storage is so undesirable from other aspects as to warrant special precautions to reduce it to a minimum.

Mr. Erik Holten, Chief Engineer of A/S Thomas Sabroe & Co. of Arhus, Denmark, speaking on *Ice, its Production and Use*, compared the old method of ice production in big brine tanks with modern 'direct' methods of making ice, and briefly described some methods of making ice in blocks or in comminuted form. He drew attention to the use of ice in the preservation of various foodstuffs, especially vegetables, fish and fish fillets, and ended his lecture with a few words on dry-ice.

Mr. G. Borgstrom, Director of the Swedish Institute of Food Technology in Gothenburg, dealing with the problem of *Cold Storage of Fruits and Vegetables*, first surveyed the research programme followed by the Swedish Agricultural Research Council in this field after the war. The subject of fruit and vegetables is divided into two sections: (1) potatoes and root crops, and (2) berries and green vegetables. He laid emphasis on storage and distribution losses and methods of reducing them.

Microbiology of preserved fruits and jams

The *Revue de la Conserve*, in the October 1948 number, published a report presented by Mr G. Jakovliv to the XXIst Congress of Industrial Chemistry held in Brussels last September. An interesting aspect of the manufacture of preserved fruits and jams is dealt with, namely the precautions which have to be taken against noxious micro-organisms. The fruit, when it arrives at the canning plant, carries numerous micro-organisms on the surface: moulds, yeasts and bacteria, dangerous both as vectors of disease and for the preservation of the product. Washing with polluted water may deposit typhoid, cholera and dysentery germs on the fruit, whence the necessity of hygienic precautions. Other micro-organisms are carried by the sugars utilized in making jam as a preservative. The ambient surroundings may pollute the preserves if not hermetically sealed.

To check their action, recourse is had to different agents which affect moulds, yeasts and bacteria to a varying degree.

Action of acidity. — The pulp of fruits is already bactericidal, especially that of citrus fruits and strawberries, owing to the acids and essential oils. The bacteria are destroyed by the normal acidity of fruit preserves ($pH = 3\text{-}4$), but moulds and yeasts are acidophiles. In the canning industry, to preserve the fruit pulp not used immediately, 1.5 to 2‰ SO_2, corresponding to 0.5% free SO_2, is added. This dose kills the bacteria and suffices to check the development of moulds and yeasts.

Action of sugars. — A small quantity of sugar is sufficient to inhibit the growth of bacteria. In practice sugar is the classic preserving agent; industrially manufactured jams contain 62.5 per cent. sugar, expressed in saccharose.

Action of heat. — A temperature of 65° C. suffices to inhibit yeasts, but 75° are required to check moulds. Cooking of the product, or high pasteurization, in hermetically sealed receptacles, are the current means of preservation. Scalding of the pulp and juice, except for berries, greatly reduces the bacterial flora.

Action of cold. — A temperature of —10° C. checks the development of microbial flora; the usual cold storage temperature, however, ranges from —18° to —20° and ensures the more or less complete destruction of some species at the end of 7 to 8 months.

Besides these processes, which are usually combined, other new methods are continually being tried. Many manufacturers introduce 10 per cent. CO_2 into the free atmosphere in the containers, or else seal them under high vacunm. Antibiotics are the order of the day. Tyrothricin, isolated from cultures of *Bacillus brevis*, has been recommended in the United States for the treatment of yeast in breweries; the bacteria which contaminate the yeast are destroyed without the yeast itself being harmed. On the other hand, tyrothricin has very little effect on the growth of moulds, only checking it at the dose of 0.75 mgm per gm. Lastly, mention should be made of the bacteriological investigations recently carried out at the University of California which have shown that dielectric heat emitted by a radar completely destroys in one minute the spores of *Penicillium* and *Aspergillus*. It is possible that this process will later be applicable on an industrial scale.

The author of the report concludes by advocating adequate drying of the surface layer of jams to ensure keeping.

ECONOMICS AND MARKETS

International trade in Italian Agricultural Products

(*Extract of the Annual Italian progress and program Report for* 1948, *for the Annual Conference of FAO*)

The greater part of the Italian food imports is paid for by foreign currency obtained through the export of other typical agricultural products which exceed the home requirements.

Considering 1938, 1946, 1947 it must be pointed out that the importation of agricultural products has increased continuously so that the goods imported in 1947 were more than double the tonnage registered in 1938 and about $^1/_3$ above that of 1946.

Considering both foodstuff agricultural products and those connected with agriculture (*i. e.*, farm machines, fertilizers, etc.) for the 3 years in question, the following figures result (for these data, reference is always made to the solar year) 1938 : 1,639,480 tons ; 1946 : 2,364,704 tons ; 1947 : 3,535,575 tons.

The greater part of the above imports is represented by cereals, pulses, roots and their by-food-products.

The increased importation of these foodstuffs is explained by the deficiency of the Italian cereal production, due particularly to the post-war situation and to the unfavourable seasonal conditions (especially drought).

Importation of fish products, fresh, frozen and processed meat (salted, dried) etc., meat & broth extracts has also shown a considerable increase in the post-war period, as compared to pre-war years, and it has been possible thus partly to meet the food requirements of the Italian population.

On the other hand, although the importations of oil-seeds registered an increase in comparison with the preceding year, the figures fall shorter than those of 1938 : 213,614 tons ; 1946 : 11,897 tons 1947 : 81,077. This trend is presumably justified both by the distance of some of the supply markets and the consequent transport difficulties, and by the deficiency of fat production which has rendered it necessary to control distribution of the available oil-seeds among various countries.

The imports of certain products (*i. e.*, wool and cotton) connected with agriculture, register a trend similar to that of cereals, pulses and potatoes. The increase of these imports is due to the particular situation of the Italian textile industry, which has had practically no war-damage and has therefore manufactured raw materials for foreign consumers.

As for other commodities, after a decrease in 1946, with respect to the 1938 total volume, a considerable increase was registered in 1947 and in some cases the pre-war importations have even been surpassed.

Contrary to what has been observed concerning imports of the principal food and agricultural products a considerable decrease is remarked in various Italian agricultural and food exports.

The difficulties of exporting vegetable and fruit products are caused by the existing international trade policy and by the absence of some traditional markets, principally that of Germany. In fact the Italian fruit and vegetables sales to Germany, in the pre-war period were 21.12% of the quantity of the total exports and 17.36% of their value.

As far as alcoholic liquors are concerned, commercial and currency difficulties have determined the considerable decrease of Italian exports of these products.

The revival of exports of meat and broths, soup and eggs, milk and dairy products, has been hindered by the necessity of not depriving the home market of foodstuffs, owing to the scarce availability of food in Italy.

As regards the future prospects of Italian international trade, certain war and post-war phenomena have modified the exchange courses. The usual courses, however, will take place again. At present efforts have been made to secure other markets. Thus the export of fruit, vegetable, and citrus fruit products already improved in 1947, in comparison with the previous year, because of new markets ; 5 $^1/_2$ million q. in 1947 against about 3 millions registered in 1946 ; however this figure is only half of the quantity of the pre-war exports. Steps to facilitate the revival of the traditional channels, have been taken recently and some improvement has been achieved.

In order to be able to overcome the difficulties of ensuring availabilities for home consumption and for export, Italy has participated in various Conferences on the distribution of food products, and has concluded, or improved many agreements in this respect. Italy has thus participated in the stipulation of the plurilateral wheat agreement under which the supply of 10 million q. per year will be guaranteed during the quinquennial 1948/49-1952/53.

Among the bilateral agreements the more important for Italian agricultural supplies are those made with : Argentina, France, Yugoslavia, Bulgaria, Poland, Sweden and Denmark, (imports of wheat, maize, rye and barley, meals, edible fats, frozen meat, fresh, frozen and salted fish, potatoes, pulses, eggs, livestocks, timber fertilizers, raw tobacco ; exports of vegetables, fresh dried fruit,

fresh legumes, wines, hemp, raw silk, agricultural machines and spare parts).

The Italian agricultural production has never completely satisfied the food requirements of the Italian people. Staple food products have always been imported, whereas fruit and vegetables and products of high economic and nutritional value have been exported. The war and the immediate post-war period with the consequent difficulties regarding essential products, the low productive levels and the incapacity of absorption of the various countries have, for financial and economical reasons, brought about the following consequences in the Italian food system : (1) limited availability of essential basic products ; (2) impossibility of exporting certain food products (oil, cheese and sausages) so as not to withold them from the needy internal market.

The above elements characterize the structure of the home food balance for the 1948 consumption. Notwithstanding the importation of about 23,000,000 q. of cereals, the general consumption level for that year for the entire population will attain 156 kg. per caput instead of the 200 kg. before the war.

In the cured fish field, the availabilities have increased on account of the importation of stockfish and codfish, thus partly compensating the considerable deficiencies still existing in the meat sector.

It is expected that other fields will resume a more intense productive trend and will attain an efficient equilibrium between availabilities and consumption, so as to bring about the normalization of Italian food requirements. This aim, however, can only be attained in the case of an adequate increase of bread cereals availabilities, the food diet of the Italian population being essentially based on cereal products.

Western Zones of Germany

(*Summary of an original article sent by Mr. Werner Zimmerman. 'Ernährungsdienst' Braunschweig*).

The currency reform undertaken in the Western Occupation Zones of Germany on 20 June, 1948, on the one hand, helped agricultural producers by giving them the possibility of selling their products for new money, but on the other hand, increased their difficulties, because – in contradistinction to conditions prevailing in the major spheres of industry and commerce at the time – barns were empty and livestock numbers considerably decreased. The necessity of economic stability is, however, imperative to the interests of agriculture, and it is not yet possible to say if this monetary reform will contribute to its realization, as prices are still subject to fluctuations.

The fact, however, that agricultural producers must sell their products at pre-war prices, while the necessary materials and equipment – if obtainable at all – must be paid for at the increased post-war rates, adversely influences the needed rehabilitation in agriculture and greatly stimulates the rampant black market.

The most urgent agricultural problem is to provide farmers with sufficient equipment and fertilizers. Shortly after the money reform, only a few small farmers and fruit-growers were enabled by the sale of their output to gross enough income to buy these materials : the majority were short of funds. In addition, the financing of agricultural production is impaired through lack of liquid means on the part of commerce and big mills.

The agricultural output is so far 35-50% below the prewar level. The loss is to be seen in the decreasing yield of cultivable land, smaller milk production, sinking of fat contents in milk, and deplorable condition of livestock.

The first results of an organized effort to bring about an improvement may be seen shortly. As the supply of fertilizers in the autumn of 1947 and early in the spring of 1948 was better than that of any previous year, and the growing conditions for cereals and pulses were favourable, it is expected that the harvest will be much more successful than last year's ; even so, it may be some 20% below the level of those of prewar years.

Trade Agreements

The Information Bulletin of the Albanian Legation in Belgrade reported the recent arrival in Albania from the **Soviet Union** of the following articles ; machines, tractors, building materials, 35 motor trucks, 3,900 tons of wheat. These commodities were provided for under the terms of the recently concluded **Albanian-Soviet** trade agreement.

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The **Austrian-Bulgarian** trade agreement covering the period until December 1949 provides for a commodity exchange to the value of 15 million dollars. Austria is to receive tobacco (1,000 tons), eggs, maize feeds, fruits, skins, pyrite and grains (1,500 tons) in return for iron, steel products, paper, railway lines and electrical equipment.

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A trade agreement between **Austria** and **Bizonia** was signed in December 1948 in Vienna.

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Austria and **Denmark** made a trade agreement on 22 September 1948 which was signed in Copenhagen. The duration is for one year. Goods worth

20 million Kroner will be exchanged in both directions ; from Denmark, fish, eggs, cheese, preserved milk products, casein, pharmaceutical products and cryolite as well as machinery ; from Austria, magnesite, steel, ballbearings, textiles, yarns and ready-made clothing.

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Austria has reached a new trade agreement with **Norway** providing for a commodity exchange to the value of 3 million U. S. dollars. Norway will supply mainly fish, casein, pyrite, magnesite, rolled iron, surgical equipment, leather goods. Austria will export in return chemicals, machinery, and equipment, iron goods, steel, textiles, hides and skins.

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The **Belgo-Luxembourg Economic Union, Bizonia** and **Argentina** have concluded an interesting tripartite commercial agreement. Bizonia will supply Belgium with knives, precision instruments and machinery ; Belgium will supply Argentina with her industrial products and Argentina will export to Bizonia meat, foods, and various raw materials. The value of goods exchange will amount to some 2 1/2 million dollars.

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The fifth supplementary protocol of 10 November 1948 to the Trade Treaty of 17 September 1945 between **Belgo-Luxembourg Economic Union** and **Denmark** provided for additional commodity exchange in the last three months of 1948. Denmark was to export butter, eggs, horsemeat, grass seeds, poultry, game, apples and to receive in return wool, cotton yarn, metals and industrial products.

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Belgo-Luxembourg Economic Union on one side and **Italy** on the other have agreed through a note exchange to extend the validity of their provisional trade agreement of 5 September 1948, due to expire on 5 December 1948, until the conclusion of a new agreement.

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Belgo-Luxembourg Union and **Poland** concluded a new trade agreement in Brussels on 11 November 1948 covering the period of fourteen months from 1 November 1948. Provision has been made for an extension of the pact over a further period of twelve months unless notice is given. Poland will export rye, malt, wood products, pork, potatoes, eggs, and receive in return palm oil, industrial products, Thomas slag, pharmaceutical products, and machinery. The value of the goods exchange will amount to 1,200 million Belgian francs in each direction.

***

A Joint Commission, acting under the terms of the trade agreement between **Belgo-Luxembourg Economic Union** and **Switzerland,** has fixed trade exchange commodity quotas to the value of 310 million Swiss francs for the period of 1 October 1948 to 30 September 1949. Switzerland will export mainly machinery, textiles, footwear, watches and cheese and will receive in return mainly metallurgical products and coal.

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The Trade Agreement signed in Brussels on 11 September 1948 between the **Belgo-Luxembourg Economic Union** and **Yugoslavia** provides for a mutual commodity exchange over the period of one year from the date of signature. Yugoslavia will deliver apples, plums, maize, medical plants, hops, wines and liqueurs, oilcake, hides, skins, timber, sleepers, plywood, and will receive in return chemical and pharmaceutical products, aniline dyes, tyres, footwear, textiles, household utensils, agricultural machinery, industrial equipment.

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(*Bulgaria, see also Austria*).

A trade agreement between **Bulgaria** and **Finland** provides for commodity exchange to the value of 3 million dollars. Bulgaria will supply agricultural products, tobacco, fruit in return for paper, chemicals and machinery.

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Bulgaria and the **Netherlands** signed a trade agreement covering the period until 31 December 1949. The Netherlands is to supply aniline dyes, chemical products, machines and instruments, electric material, raw rubber, whereas Bulgaria will export tobacco, cereals, hides, construction timber, wine, dried fruit, pulps and other agricultural products. The total value of goods exchange will amount to 14 million Dutch florins.

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A new trade agreement between **Bulgaria** and **Switzerland** was signed in Berne on 9 November 1948, with a view to adapting the Trade and Payment Agreement of 4 December 1946 to present conditions. New commodity lists for the period up to 31 December 1949 were drafted. Bulgaria will supply mainly tobacco, eggs, attar of roses, timber and carpets, fresh and canned fruits, vegetables and other raw materials, whereas Switzerland is to export industrial products, water power stations, electric equipment, aniline dyes and a number of breeding animals. The total turnover is expected to amount to 23 million Swiss francs. Further negotiations are foreseen to clear the Swiss compensation

claims resulting from the Bulgarian Nationalization measures.

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Between **Czechoslovakia** and **Bizonia** a new trade agreement has been signed covering one year to September 1949. Czechoslovakia will sell 24 million dollars' worth of goods and services, and buy 19 million dollars' worth of goods. Czechoslovak deliveries will include repair services for German rolling stock, potatoes, steam engines, freight cars, coal, chemicals, sugar, hops, footwear and clothing ; whereas Bizonia will supply chemical products, machine tools and light metal products. This agreement replaces the former one which expired in July 1948.

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A **Czechoslovak-Finnish** trade agreement providing for the exchange of commodities and means of payment between 1 October 1948 and 30 September 1949, covers deliveries of Finnish honey, paper products, timber, oil, turpentine and Czechoslovak textiles, engineering products, bicycles, typewriters, musical instruments, chemicals, rubber footwear, tyres, hops, sugar, malt to the value of 350 million Czechoslovak crowns for each country.

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A five-year trade agreement between **Czechoslovakia** and **Hungary** foresees the fixing of yearly quotas for commodity exchange between the two countries. The value is expected to amount to some 15,000 million Czechoslovak crowns (300 million U. S. dollars), over the whole five-year period. The agreement for 1949 signed in Prague 10 November 1948 provides for commodity exchange to the value of 1,400 million Czechoslovak crowns (28 million dollars) on each side. Czechoslovakia will import 4,000 tons of edible oil, 24,000 tons of oil seeds, 3,000 tons of lard, 2,700 tons of pork and considerable quantities of maize, naphtha products, aluminium, raw materials for the pharmaceutical industry and a number of semi-finished goods. Hungary in return will import mainly coke, cars and machinery, chemical products, cellulose, timber and ceramics.

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The validity of the **Czechoslovak-Netherlands** trade agreement which was to expire at the end of 1948 has been extended over another two months. The original goods quotas remain unchanged.

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An agreement has recently been reached between the governments of **Czechoslovakia** and the **Soviet Union** implementing for the year 1949 the volume of their commodity exchange, on the basis of the Trade Agreement of 11 December 1947. Czechoslovak imports from the Soviet Union are to reach the value of 8,700 million Czechoslovak crowns (174 million U. S. dollars) in 1949; some 40% of these imports are to consist of various foodstuffs, and only 3% of finished products. The greater part of imports is to consist of raw materials. Meanwhile Czechoslovak exports to the Soviet Union in 1949 will amount to 9,000 million Czechoslovak crowns (180 million U. S. dollars). The balance is intended to cover part of the loan of 1,150 million Czechoslovak crowns (23 million U. S. dollars) granted by the Soviet Union in 1948, for extraordinary foods purchased by Czechoslovakia. It is expected that, in 1949, one or the other signatory will suggest some further deliveries.

Soviet Union deliveries in 1949 will comprise mainly iron ore (800,000 tons), iron (100,000 tons), cotton (35,000 tons), manganese, chrome ore, wool chemical products, metals, ball bearings, salt, fertilizers, wheat, lentils, peas, seeds, flax, sunflower seeds and other raw materials, while Czechoslovakia is to supply mainly footwear, cigarette paper, cotton goods, glass, chinaware, hops and machines.

This agreement raises the Soviet Union's part in Czechoslovak external trade from 13 to 25%.

Mr. Kalina, Director of the Czechoslovak State Textile Combine announced in Prague in December 1948 a 4,500 million crown textile deal with the Soviet Union, which is to supply Czechoslovakia with 45,000 tons of raw cotton and to receive in return 8,000 to 10,000 tons of finished textile products. The Soviet Union will also furnish 1,500 tons of wool, 300 tons of camel hair, 500 tons flax fibre, 150 tons jute, 50 tons animal hair, and 50 million crowns' worth of skins for hat making.

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Since October 1948 the commodity exchange between **Czechoslovakia** and **Switzerland** has been governed by a new trade agreement, according to which Czechoslovakia exports sugar, malt, hops, glassware, porcelain, coke, cars, machinery, paper, textiles, in return for pharmaceutical products, watches and various agricultural products,

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Denmark (*see Austria, Belgo-Luxembourg Economic Union*).

A trade agreement between **Denmark** and **Argentina** signed in Buenos Aires on 7 December 1948 will govern the commodity exchange between the two countries for the next five years. The trade volume for the next year was fixed at 40 million Danish crowns. Denmark is to export machinery,

apparatus, iron goods, pharmaceutical products, fishing boats, seed potatoes. Argentina will supply feedingstuffs, quebracho, fats and hides.

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The validity of the present trade agreement between **Denmark** and **Finland** has been extended until 1 May 1949. At the same time the goods contingents have been increased by some 57 million Danish crowns on the Finnish side (timber, cellulose, woodwool, newsprint, paper) and by about 52 1/2 million Danish crowns on the Danish side (butter, lard, mutton, malt, seeds, textiles, chemicals).

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A trade agreement between **Denmark** and **Poland** signed in Warsaw in December 1948 covers the period from 1 October 1948 to 30 September 1949. Danish exports (100 million Danish crowns) consist mainly of machinery, industrial products and also to a more limited extent, of foodstuffs, whereas Poland's deliveries (160 million Danish crowns) comprise mainly coal and coke. The balance is to partly cover the outstanding Polish debt for deliveries of horses in 1946, 1947, the rest of which is to be settled in cash (sterling, dollars).

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The Danish Potato Exports Board have concluded a deal with **Spain**. Denmark will export 50,000 tons of potatoes and receive in return 8 million Danish crowns' worth of wine and fruit.

***

A trade agreement signed between **Denmark** and **Switzerland** in Copenhagen on 4 December 1948 provides for an increase in their commodity exchange. In 1949 Switzerland will supply goods to the value of 80 million Danish crowns, whereas Denmark's exports will amount to 112 million Danish crowns, the balance being to cover arrears and interests. Denmark's exports comprise 5,500 tons of butter, 21,500 head of slaughter animals, 1,200 tons meat, poultry and eggs ; Swiss exports consist mainly of industrial products such as textiles, pharmaceutical and chemical products, and machinery.

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Finland (*see Bulgaria, Czechoslovakia, Denmark*).

Canada and **Finland** have recently reached an agreement under which Canadian goods in Finland are not to be subject to any higher tariffs than British goods, and Canada will impose no higher tariffs on Finnish goods than those on goods of any other countries.

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Under the provisions of a trade agreement between **Finland** and **France** of 30 April 1948, a Franco-Finnish Joint Commission signed a protocol on additional commodity exchange for the period until 30 April 1949, in Paris on 13 November 1948. The mutual commodity exchange which, under the former agreement, was to amount to 9,000 million French francs, has been increased to 14,000 million French francs.

France is to export wine, liqueurs, chemical products, textiles, iron, steel, mechanical and electrical equipment, and will receive in return considerable deliveries of wood pulp for paper production and rayon pulp.

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A new **Finland-Hungary** trade and payment agreement covers the period until the end of 1951. The volume of the commodity exchange until the end of 1949 has been fixed at 3 million U. S. dollars. Hungary will supply maize, oil cake, fruit pulp, tinned tomatoes, machinery and textiles and will receive in return raw materials for the paper and rayon industries. Payments will be effected on a dollar basis.

***

A trade agreement between **Finland** and **Norway** provides for their commodity exchange until 31 October 1949. Norway will provide raw material for margarine and soap production, fish, aluminium and chemical products, while Finland is to export timber, porcelain, machinery and iron and steel products.

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Finland and the **Soviet Zone of Germany** have concluded a trade agreement whereby goods worth 1,625,000 sterling are to be exchanged. Finland is to send textiles, chemicals, engines and optical products and will receive paper iron ore. and cellulose.

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A new trade agreement between **Finland** and **Switzerland** fixes the commodity exchange for the period from 1 September 1948 to 28 February 1950 at some 30 million Swiss francs for Finnish deliveries, and at some 25 million for Swiss deliveries. Switzerland will export mostly machinery and watches, and receive in return cellulose and paper.

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France (*see Finland*).

Through a note exchange of 5 October 1948 the trade agreement between **France** and **Ecuador** of 1 August 1946 has been extended for a further period of one year.

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A **French-Italian** protocol signed within the framework of other consultations in Brussels on 6 December 1948 provides mainly for the facilitation of exchange of Italian citrus fruit for French potato seeds and importation into France of coke, tar and nitrogenous fertilizers, also for resumption of discussion on Italian man-power problems in France.

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France and **Spain**, in a trade agreement of 20 October 1948, fixed the volume of their commodity exchange, on the basis of their commercial treaty of 8 May 1948, at 3,000 million French francs. France will export horses, cars, pharmaceutical products, in return for agricultural products, dried fruit and oranges.

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France and **Switzerland,** negotiating in Berne on 10 November 1948, agreed to extend the present three agreements on commodity exchange, due to expire on 31 October 1948, to 28 February 1949. These agreements are : financial, of 16 November 1945 ; commercial, of 29 July 1947 ; exchange rate of 28 March 1948. Negotiations for a new agreement will begin in Paris on 21 February 1949.

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France and **Trizonia** have agreed to a mutual exchange of goods valued at 600 million U. S. dollars over a one year period until 30 June 1949. Deliveries began on 19 November 1948. This trade agreement is the first made by the new Trizonal Union, and the largest single one made by Western Germany since the occupation began. Trizonia will receive foodstuffs, fertilizers, iron, steel, chemical products, mechanical goods, raw materials, and will export coal, coke electric power iron ore, refractory products, timber, cellulose, wood products, mining and electrical machinery.

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Germany-(Bizonia) (see Austria, Belgo-Luxembourg Economic Union, Czechoslovakia).

Bizonia and **Egypt** have made a trade agreement, whereby Egypt will supply Bizonia with long-staple cotton, crude drugs, hides, skins, gums and waxes in exchange for machinery, steel products motor cars, road tractors, chemicals and pharmaceutical products.

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A recent trade agreement between **Bizonia** and **Italy** fixes the commodity exchange value until 30 June 1949 at 51 million U. S. dollars for Bizonia and 56 million dollars for Italy, the balance in excess of the mutually agreed credit of 5 million dollars to be settled in cash. Italy will export foods, seeds, nitrogenous fertilizers, cork, bauxite, sulphur and yarns, and Bizonia will export iron, steel, coal, machinery, dyes and hops.

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A new trade agreement fixes the commodity and services exchange between **Bizonia** and the **Netherlands** for the period of 1 August 1948 to 31 July 1949 at the value of 181 million florins for the Netherlands and 230 million florins for Bizonia. Dutch exports comprise mainly vegetables, foods, chemicals, flax, and rubber, while Bizonia will export machinery, lumber, textiles, iron, steel and coal.

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Under a Polisk-British Ministry of Food agreement, **Poland** is to supply **Bizonia** with 50,000 tons of rye, deliveries to be completed by February 1949.

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Bizonia and **Spain** concluded a trade agreement providing for commodity exchange to the value of 11 million dollars each way until 31 December 1949.

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A trade agreement signed in Frankfurt on 7 October 1948 between **Bizonia** and **Uruguay** fixed their trade volume at 15 million U. S. dollars. Bizonia is to receive Uruguayan products in exchange mainly for electrical equipment.

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Germany-(Trizonia) (see France).

Trizonia (Joint Import Export Agency – JEIA) concluded with **Turkey** a 75 million dollar trade agreement in December 1949. Trizonia will import tobacco, raw cotton, dried fruits, oil seeds, chemical preparations, ores and other articles in return for industrial and agricultural machinery, chemicals, textiles, glass and china products.

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Germany-(Soviet occupation) zone (see Finland).

The trade agreement between the **Soviet Occupation Zone of Germany** and **Norway** was prolonged until the end of 1948. Norway was to receive potassium salts, sulphuric sodium, and clay, in return for fish, cod liver oil and pyrites.

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The Soviet Military Administration in Germany has signed a trade agreement with **Poland** to the value of 36 million dollars.

A supplementary agreement between **Poland** and the **Soviet Occupation Zone of Germany** has increased the total commodity exchange value to 96 million U. S. dollars. Poland will supply mainly coal, in return for machinery, kali salts, timber and chemical products.

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The **Italo-Greek** Reciprocity Agreement of 31 March 1947 has been prolonged by three months until 31 December 1948. Meanwhile terms of a new agreement are being negotiated.

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Hungary (*see Czechoslovakia, Finland*).

A new trade agreement signed between **Hungary** and **Italy** in Rome, December 1948 provides for a 1949 commodity exchange value of 21,000 million lire, *i. e.* five times the present volume. Hungary is to supply slaughter cattle eggs, butter, cereals, maize, cast iron, steel, timber and raw materials for the chemical and pharmaceutical industries. Italy will export mainly machinery, tractors, automobiles, dyes, rayon, ball bearings, textiles, citrus fruits, etc. Payment will be effected in Italian lire.

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A **Hungarian-Soviet** trade agreement, valid till the end of 1949, was signed in Moscow in October 1948. Soviet exports comprise industrial equipment, raw materials for industry, agricultural machinery ; Hungarian exports will be finished industry products, machines, and agricultural produce.

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The present **Hungarian-Swedish** trade agreement has been prolonged until September 1949, and the volume increased to 55 million Swedish crowns. Sweden will export mainly industrial products such as bearings, in return for maize, oil cake, tinned tomatoes, paprika, beans and malt.

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The commodity exchange between **Hungary** and **Switzerland** until 30 September 1949 was decided by an agreement signed in Budapest on 22 October 1948. An increase in deliveries is foreseen on both sides. Switzerland will receive raw materials and consumption goods worth 91 million Swiss francs, while Hungary will import traditional Swiss finished products to the value of 58 ½ million Swiss francs. The balance will cover unsettled obligations, freight and various other services. Two thirds of the Hungarian exports(valuing 60 million Swiss francs), will consist of agricultural produce (cereals, pulses, cattle, poultry, hogs, eggs, wine and sugar).

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Italy (*see Belgo-Luxembourg Economic Union, France, Greece, Hungary*).

Italy and **Iran** reached an agreement in November 1948 whereby the goods imported from one of these countries to the other will benefit from the treatment of the most favoured nation.

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A shipping trade and payment agreement between **Italy** and the **Soviet Union** signed in Moscow 11 December 1948 gives a new impetus to the resumption of trade exchange between the two countries after a ten-year break. Commodity exchange volume is to reach 30,000 million lire yearly for both signatories, which nearly reaches the 1931 record volume of 561 million lire (equal to about 36,000 million lire now). The Soviet Union is to supply in the first few years : grains (300,000 tons), oats (10,000 tons), iron ore, asbestos, kaolin, timber, in return for Italian cranes, steel ropes, cables, compressors, pyrite, sulphur, almonds, citrus fruit. Italy will also export in the next three years investment goods worth 60,000 million lire, such as locomotives, turbines, railway lines, for which the Soviet Union will supply raw iron, steel, oil, copper, nickel and also cereals as compensation for the workers' salaries.

The shipping agreement enables Italian ships to resume their Black Sea routes.

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The Italo-British Joint Commission drafted a new plan for an increase of commodity exchange between **Italy** and the **Sterling Area**. Italy is to receive cereals, petrol, copper, agricultural machinery and raw materials for textiles in return mainly for plywoods, flax, silk and cork.

In addition, an agreement was signed in Rome on 26 November 1948, fixing the exchange rate of the pound in Italy in relation to the U. S. dollar (£ 1 = 4.03 $). At the same time, preliminary steps were taken to re-examine the general lines of commercial relations between Italy and the Sterling Area. An increased commodity exchange is expected.

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The validity of the **Italo-Swedish** trade agreement of 20 January 1948 has been extended until 30 September 1949. The protocol was signed in Rome on 26 November 1948 and foresees an increase in the volume of commodity exchange which is to reach approx. 250 million Swedish crowns.

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The validity of the **Italo-Swiss** trade agreement of 15 October 1947, which was to expire by 21 October 1948, has been extended for another year.

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The **United Kingdom and the U. S. A. Military Commands**, on behalf of their zone of the **Free Territory of Trieste**, signed, on 22 September 1948, an agreement with **Italy** on financing commodity exports to Trieste. Italy is to place at the disposal of the Military Government of Trieste, for the year beginning 1 July 1948, 6 million U. S. dollars for the purchase of coal, steel, timber, alloys, tobacco, machinery and industrial products and transportation services, with the understanding that no dollar imports will be effected if the purchase can be realized on the Italian market or on the basis of Italian commercial agreements.

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After the expiry on 30 September 1948 of the trade agreement of 12 April 1947 between **Italy** and **Turkey**, and its prolongation pending negotiations, a new trade and shipping agreement between the two countries was signed in Rome on 10 November 1948. The new agreement which runs from 15 November 1948 to 30 June 1949 foresees a commodity exchange to the value of 140 million Turkish pounds (30,000 million Italian lire). Italy will export mainly textiles (35 million Turkish pounds), iron and steel finished and semi-finished products, tractors, agricultural machinery, automobiles, trucks, tyres, chemical and pharmaceutical products, dyes, technical and surgical equipment, while Turkey will supply fish, hogs, eggs, skins and hides, wool, cereals, timber, pulses, raw cotton, tobacco, chrome ore, iron and steel scrap, linseed, oilseed and olive oil. Unless two months'notice is given, the present agreement's validity will be automatically extended over another year's term. Payments will be reckoned on a U. S. dollar basis.

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Netherlands (*see Bulgaria, Czechoslovakia*).

A provisional trade agreement between the **Netherlands** and **Indonesia**, covering the period from 1 October 1948 to 1 October 1949, provides for Dutch exports of textiles and other industrial products to the value of 250 million florins as against Indonesian exports of copra, peanuts, palm oil, tea, hides, tin, fibres, rubber, etc. to the value of 300 million florins.

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An agreement has been reached between the **Netherlands** and **Spain** to extend their trade agreement until 1 June 1949, and to increase their mutual commodity exchange by 50%.

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The second additional agreement between the **Netherlands** and **Sweden** has increased the value of Dutch exports by 30 million Swedish crowns, that of Swedish exports by 20 million Swedish crowns. The Netherlands is to receive iron ore, timber, paper, cellulose, steel products and machinery in return for copra, palm oil, fats, glycerine, chemical products, rubber and fishing nets.

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Norway (*see Austria, Finland, Soviet occupation zone of Germany*).

In absence of a trade agreement between **Norway** and **Spain**, a private commodity exchange agreement has recently been concluded between two groups of Norwegian and Spanish businessmen, covering goods worth 7 to 9 million crowns. Norwegian exports are to comprise mainly fish, woodwool and forestry products; Spain will export zinc, lead, textiles, salt, cork wine, onions, apricots and almonds.

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Poland (*see Belgo-Luxembourg Economic Union, Denmark, Soviet occupation of Germany*)

A three-year trade agreement between **Poland** and **Argentina**, signed in Buenos Ayres on 7 December 1948 provides a commodity exchange to the value of 5 million U. S. dollars. Poland will export coal (3 million tons), cement, railway material, metal products, electrical equipment, newsprint, timber, glassware, porcelain, while Argentina is to supply hides, tannin, wool, oilseeds, fats, fruits.

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Soviet Union (*see Albania, Czechoslovakia, Hungary, Italy*).

Sweden (*see Hungary, Italy, Netherlands*).

A trade agreement between **Sweden** and **Argentina**, covering one year from 1 December 1948 was signed in Buenos Aires on 23 November 1948. Sweden is to export cellulose, paper, timber, iron and steel, motors, machines, electric-equipment, chemicals and is to receive in return cereals, feedingstuffs, fats, pelts, wool, quebracho, glycerine and casein. The volume of commodity exchange should attain 400 million Swedish crowns; payments will be effected in this currency.

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Sweden and Columbia have recently signed a trade agreement increasing the value of their annual commodity exchange to 81 million Swedish crowns. It covers the period from 1 November 1949 and will be extended over the next years' period unless notice is given. Columbia is to double her imports of Swedish goods.

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Switzerland (*see Belgo-Luxembourg Economic Union, Bulgaria, Czechoslovakia, Denmark, Finland, France, Hungary, Italy*).

The **Sterling Area**, including the **United Kingdom** and its **colonies**, with the exception of **Hong Kong**, together with **Australia**, **India**, **New Zealand** and **South Africa**, has concluded an agreement with the Supreme Commander Allied Forces, acting on behalf of occupied **Japan**, on a trade volume of 55 million sterling between these countries and occupied Japan from 1 July 1948 to 30 June 1949. More than half Japan's exports will consist of cotton textiles (16 million sterling's worth), while she will import a wide range of essential raw materials, such as raw wool, iron ore, salt, raw cotton, cereals, petroleum, rubber, tin, jute, oilseeds, wool waste, coal, hides, manganese, gums and resins. Trade will be conducted on a sterling basis.

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A recent agreement beween the **United Kingdom** and **Peru** increased the volume of their commodity exchange. The United Kingdom will receive the necessary raw materials in return for its industrial produce. Payments will be effected in sterling.

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The **United Kingdom** signed a meat contract with **Uruguay** in Montevideo on 1 December 1948, providing for the supply of 34,000 tons. The contract runs for one year as from 18 February 1949.

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Three agreements were signed in London on 23 December 1948 between the **United Kingdom** and **Yugoslavia** : on trade, on compensation, and on currency and property. The trade agreement provides for commodity exchange to the value of about 15 million sterling for both signatories until 30 September 1949. England will receive mainly timber and timber products and feedingstuffs, in return for her textiles, chemical products and machinery. There is possibility of the trade value being extended beyond the value indicated. The second agreement establishes compensation rates for British property in Yugoslavia affected by Yugoslav nationalization and expropriation measures. The third agreement is concerned with restitution of funds and property affected by wartime regulations in both countries.

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Yugoslavia (*see Belgo-Luxembourg Economic Union, United Kingdom*).

FISHERIES

Belgian fishery

(*Extract from the Annual Belgian Report to the Annual Conference of FAO* 1948).

The increase in fishery between 1938 and after the war can be seen from the figures representing the general total landings : 1938 — 40,893 tons ; 1946 — 70,048 t. ; 1947 — 80,773 t.

Taking into account, on the one hand, the intensity of fishing concentrated mainly in the North Sea and the seas adjacent to the British Isles and, on the other, the increase in the tonnage and motor power of the Belgian fishing fleet, production may be estimated at :

Species	In 1948 tons	In 1949 tons
Deep-sea fish	50,000	52,000
Herrings and similar species	31,000	32,000
Shrimps	3,000	3,000
Mackerel	400	400
	84,400	87,400

Operations will be directed mainly to fishing of round fish at distant banks, for popular consumption, while the fishing of shotten herring will be reduced.

Since the flexibility of the domestic demand is not illimited, the quantities available for export will be larger unless the volume of imports is diminished.

Herrings gutted and packed are sold exclusively on the domestic markets.

Uncontrolled imports of Portuguese sardines have caused a falling off in the Belgian canning industry. In addition, Belgium has been unable to renew pre-war exports owing to the difficulty of payments in international trade. Consignments arranged according to certain trade agreements have remained blocked because of the lack of foreign currency.

The herring-curing industry had no difficulty in obtaining supplies as a result of the very abundant Belgian catch of roe-herring for which the season in 1947 was exceptionally long. The Belgian cur-

ing industry easily covers the requirements of the home markets in kippers, and could also export. An improvement in quality and packing is required to maintain the present output. A transparent pack should be used for smoked herring and would be a considerable advance as regards hygiene and preservation.

With a view to protecting small scale coast fishing of shrimps and spent herring, it is prohibited to "(*a*) fish herring with fishing vessels over 200 h.p.; (*b*) fish in these waters with weighted trawls so as to avoid scraping the sea bed and jeopardizing the normal breeding of the shrimp". An endeavour has also been made to limit the number of small vessels and, in accordance with the recommendations of the Conference of Overfishing, to restrict the building of vessels for inshore, offshore and limited deep-sea fishing.

"At the end of 1947, the Belgian fishing fleet totalled 27,909 gross tons as against 28,037 gross tons in 1938. Nevertheless, the vessels for limited and unlimited deep-sea fishing (steam) exceed the tonnage attained for these types before the war. Old vessels have been replaced by new types which meet all requirements as regards modern technique and guarantee the crews a much greater security and better health conditions than before the war; the fish will be maintained clean and fresh".

The improvement of methods of handling during marketing is now being studied.

A single program of fishery instruction was put into effect in 1947. A fishery school was set up by the State at Heist and another through private initiative. Ostend, Nieuport and Zeebruges have a technical day school. Measures have been proposed to stabilize fish prices, improve the standard of living of the fishermen, reinforce professional organization in order to safeguard production, organize a continuous refrigerator system, and lastly, to improve technical instruction and scientific and technical research.

French fishery

(*Data abstracted from the annual French Report on the Food and Agriculture Situation in* 1947-48).

In 1947, French fishery regained the prewar production level with landings amounting to approximately 300,000 tons, as a result of the progressive building up of the fishing fleet. In that year the total tonnage of wooden vessels appreciably exceeded that for 1939. Some steel vessels had been repaired and an additional 35 launched. In 1948 another 20 vessels were commissioned. The fishing industry has difficulty in obtaining liquid fuel supplies.

The price control for salt-water fish was lifted on 25 March 1948.

Fresh-water fish landings are calculated at 10,500 tons, comprising 4,400 t. from lakes and rivers, 5,600 t. from pools and 500 t. from salmon-breeding enterprises. The sale of this fish has been unrestricted since 1947.

Improvement in deep-sea fishing depends primarily on the execution of the program for rebuilding the fleet of steel fishing vessels, which is proceeding normally. The biggest vessels allocated for high-sea fishery, at Newfoundland and Greenland are equipped with the latest technical improvements. The plans for restoring the principal fishing ports destroyed by the war, include the modern fitting up of the fish markets. A program for the refrigerated transport of fresh fish to the chief consumption centres is now being studied. Quality will be checked at the distribution centres and the canning plants by marine officials and inspectors of the scientific and technical Office for deep-sea fishing.

Twenty-three marine training schools distributed among the chief ports will give theoretical and practical instruction on fishing.

Scientific research and investigations are being carried out by the scientific and technical Office which disposes of a Central Division of Oceanography and Marine Biology and 5 coast laboratories. The Office is going to refit its oceanographic vessel this year.

Measures have been taken to re-establish fresh-water fishing in order to foster fish production in the rivers, and to intensify to the maximum the production of *fario* trout spawn, essential for the restoration of French fishery. Pond fish is generally consumed locally. Instruction on this type of fishing is the province of the National School of Woods and Forests and the Hydrobiological Stations, of Paris and Paraclet. These Stations carry out investigations on fresh-water production.

Norwegian fishery

(*Extract of the Annual Report for Norway to the Annual Conference of the FAO* - 1948).

Since the end of the war the trend has been towards an increase in the trade of fresh and frozen products. Apparently this development also will continue in the near future. However, as the major part of the Norwegian fishery products is being exported, the form of the fish product largely depends on the trade agreements with other countries.

Since 1921 the Norwegian Government has granted loans through a special Bank, the Norwegian State Fisheries Bank, particularly for the procurement of fishing craft. Under an act which became effective on July 1, 1948, the manage-

ment of the bank was organized and its field of activities extended. According to these provisions the National Fisheries Bank is to grant credits against mortgages in (*a*) fishing and ailing vessels (*b*) slipways and repair yards of importance to the fishing fleet, and (*c*) plants for the storage or processing of fish and fish products. Operating credits may be granted : (*a*) for the purchase of fishing implements and other equipment for fishing and hunting and (*b*) to fishermen's coopérative associations and individual fishermen subject to particular conditions regarding the production and distribution of fish and fish products. Under the new act the bank is to have a capital stock of at least kr. 8 mill. and a contingency reserve of at least kr. 1.5 mill. Both these amounts are to be provided by Government. The Bank may only lend money with the consent of the Ministry concerned. Such loans will be guaranteed by Government.

On December 31, 1947, the total loans granted by the bank — including advance payments — amounted to Kr. 27,355,000. The capital stock of the bank was 5 mill. and the contingency reserve kr. 795,400.

Besides making loans available through the abovementioned Bank the Government also guarantees loans granted by the Bank of Norway for the production and trading in various kinds of fish. For the year 1948 these guarantees amounted to kr. 15 million.

A joint stock bank, called the Fishermen's Bank, is being established, the capital of which is being provided in collaboration between the fishermen's associations and individual fishermen. The Bank is to be an ordinary commercial bank and its purpose is to operate as a finance institute for the fishery trade with a particular regard to the fishermen's cooperative association. The share capital is to be not less than kr. 2 mill.

Distribution. — (*a*) Handling during marketing. At present new regulations are being worked out for the production and trasport of frozen fishery products, and for the Government control of these products in order to ensure the best quality possible. The question of improving the quality is one of the field continually worked upon, a task which is only limited by the funds appropriated towards the handling and transport of fish. Also the private fish trade is to a large extent engaged in this work. (*b*) Public control and inspection of the quality of fresh and cured fish, cured herring and cod liver oil is already enforced in Norway. (*c*) For domestic consumption the needs may be said to be fairly satisfactorily covered. The exports of fish have reached pre-war level.

Possibly one more fishery school may be erected in 1949. The herring meal industry and the herring fishermen have in 1948 decided to establish a research institute for the investigation of herring-oil and meal.

FORESTRY

Mediterranean timber consultation in Rome

At the first session of the FAO European Commission on Forestry and Forest Products in Geneva in July 1948, the Italian Delegate made a proposition to establish a close consultation on Mediterranean timber problems. The Commission adopted this proposition and consequently a Sub-Commission on Mediterranean Timber Problems was convened by FAO in Rome at the seat of the European Regional Office of FAO on 13 December 1948.

The meeting was opened by Mr. Antonio Segni, Italian Minister of Agriculture, in presence of the delegates of, France, Algeria, Morocco, Tunisia, Greece, Italy, United Kingdom, (Cyprus), and of observers from Israel and Yugoslavia.

Mr. A. Van Houtte, Secretary of the European Regional Office of FAO on behalf of Mr. A. H. Boerma, Personal Representative of the Director General of FAO in Europe welcomed the delegates and observers and called their attention to the interest taken by FAO in Mediterranean Forest questions.

Professor A. Pavari, Director of the Forestry Research Station in Florence, unanimously elected Chairman of the meeting, outlined in his speech the problems to be discussed and evoked the memory of the eminent French forestry expert Robert Hickel who inspired the *Sylva Mediterranea* organization.

At the closing meeting, on 17 December 1948 the reports and recommendations discussed at the various sessions were unanimously approved. The geographical delimitation of the field of action was treated in detail. Because of the complexity of this question, it would be desirable if maps materializing all statistical data could be made for each country concerned.

International collaboration was contemplated for all questions regarding reafforestation, forest and soil protection and uses. It was recommended that a rational agricultural, forest-pastoral program be set up and stress was laid on the danger to forrests of excessive grazing, touring and camping. It was considered that in this respect, action should concentrate on educating the public, and on im-

provement in the standard of living of the populations of forest zones.

The desire was expressed that FAO resume the bibliographical studies carried out before the war war by *Sylva Mediterranea*.

The delegates present undertook to submit the recommendations to their respective governments in order that the projects in view might be started as soon as possible.

Following the first meeting of the Sub-Commission on Mediterranean Timber Problems in Rome an exchange of views was arranged between the Italian Forestry experts and the representatives of FAO under the Chairmansnip of G. E. Emilio Colombo, Under-Secretary of State for Agriculture to take place on December 21, 1948. This consultation, enabled the FAO representatives headed by Mr. A. H. Boerma, Personal Representative of the Director General of FAO in Europe, to acquaint Italian foresters with the work of FAO which interests the Italian Forest Administration and to listen to their suggestions and propositions. Subjects of discussion were chestnut and poplar growing, the forthcoming World Forestry Congress in Helsinki, forestry research work, statistics and economic uses of timber. The debate was led, on the Italian side, by Mr. Giulio Sacchi, General Director of Forests, and Professors Papi, Pavari and Giordano and on the side of FAO, by Mr. Cameron and Mr. Fontaine, both of the FAO Geneva Office.

French timber production

(*Data abstracted from the French Annual Report on the Food and Agriculture Situation in* 1947-48).

Despite the efforts made following the recommendations of the International Timber Conference held in Czechoslovakia, the French forests have been unable to maintain the same level of production as in 1947. On the other hand, French fellings in Germany which furnished a very appreciable supply in 1947, were certainly increased in 1948.

The reduction in French output was particularly marked in the case of lumber in the Landes region. Requirements could only be met with the French fellings in Germany.

The total output capacity on the French sawmills is greater than the amount of raw material available. During 1947, sawing equipment was modernized to some extent, and even more so in 1948, resulting in an improvement in the products obtained.

The quantities of plywood produced are still far below requirements, while before the war this French industry exported extensively. It was estimated that the 1948 production would amount to 80,000 m³, since supplies of okumé wood from Gabun were increasing and more freightage than in the preceding years was available. In the coming years it is hoped that this production which gives work to 27 mills, will attain 150,000 m³, quantity appreciably higher than before the war.

In France, 38 mills manufacture mechanical wood pulp and 17 chemical pulp. Output possibilities in 1948 were estimated at 240,000 tons of mechanical pulp, 164,000 t. of chemical pulp and 993,000 t. of paper. The pulp-mills can obtain pulpwood from the occupation zone, but the paper-mills are dependent on abroad. Estimates indicate a reduction in output.

The productive capacity of the French forests has been diminished by the excessive fellings between 1939 and 1944. Since 1939 fires have reduced the Landes forest by over a third. Exploitation of the burnt areas ended in 1946. The forests in the east were damaged by the bark beetle.

To carry out the recommendations of the Timber Conference, (A) fellings for the production of coniferous sawn lumber were increased.

From 1 July 1949 to March 1948, approximately 2,500,000 m³ of conifers were put into exploitation (more than before the war), a remarkable effort considering the general conditions of the forests impoverished by the war and fires. (B) An endeavour has been made, with the assistance of the laboratories of the Normalization Office and the Research Centre recently set up at the Ministry for Reconstruction, to obtain a more economic utilization of timber. (C) A program has been established for intensifying re-afforestation and the conservation of wooded areas. A national forest fund has been started for this purpose. A tax of 6 per cent. levied on sawmill and forest products supplies the funds for re-afforestation operations, improvement of forest ranges, selection of forest species most suitable for local soil and climatic conditions, and, lastly, forest conservation.

Four million hectares are to be re-afforested in 20 years (200,000 ha. per year), tracks and roads will be constructed, cables installed, nurseries and seedkilns will be be organized for the normal supply of seed and seedlings.

The chestnut and the poplar will play an important part in the restoration of the forest. Two committees for these species consist of technicians, proprietors and users. An International Poplar Commission has also been set up and is placed under the aegis of FAO. The Chairman is Mr. Guinier, President of the Academy of Agriculture of France.

The national forest Fund will advance proprietors the capital necessary to avoid destruction and splitting up of the woods. Subsidies will be given in kind (seed, young plants), and also long term loans. The Fund will arrange contracts with the proprietors in the event of the State un-

dertaking re-afforestation operations. Research on forestry and forest products has been carried out since 1947 and the results will be reported to FAO and, in particular, to the International Poplar Commission.

Other measures undertaken include : improvement in forest administration with new regulations and forest laws, increase in the area covered by forest management plans ; improvement in forest inventory and forestry instruction, improvement in national supplies of sawn lumber, pulpwood and other forest products.

The forestry situation in Greece

(*Abstract from the statement made by the delegate for Greece at the meeting of the European Commission on Forestry and Forest Products, Sub-Commission on Mediterranean Problems, Rome December* 13, 1948).

Before the war, forests in Greece covered some 1,9 7,000 ha., equivalent to 15 per cent. of the total area of the country. During the wara nd up to the present, 25 per cent. or nearly 500,000 ha. were devastated.This is a very high percentage for a sparsely forested country. The Greek Government has decided to restore these forests as soon as possible ; it is estimated that three-fifths can be renewed by artificial means, while the remainder will regenerate naturally. Use will be made of 50 established nurseries totalling an area of 80 ha., and another 5 nurseries will be set up, covering 40 ha.

The annual output of the Greek nurseries amounts to 40,000,000 coniferous and broadleaved seedlings.

Although the Government is now giving its attention to the building up of the national economy in other sectors, sometimes more pressing and more important, the necessary funds will be provided to restore Greek forest resources.

On the other hand, since the present lumber requirements of the country are enormous, an endeavour is being made to exploit some forests which have remained inaccessible owing to want of transport means. A program has been drawn up for the construction of forest roads, for a total length of 600 km., during the next four years. It is thus hoped to double the output of lumber, with the production of 250,000 cubic metres of wood per year.

In order to increase timber production, an effort is also being made to improve the composition of the existing forests by applying the most rational sylvicultural methods.

To ensure effective supervision of the forests, it has been decided to rebuild the forest houses destroyed during the war, and to build others in the forests. The forestry personnel will thus have at their disposal, in the next four years, 150 forest houses.

Greece, essentially a mountainous country, with steep slopes, and a geological structure which favours the rapid wearing of the roads and soil erosion caused by torrential rains, is crossed by a multitude of torrents due to excessive deforestation.

It is calculated that there are 500 torrents. Their catchment basins cover practically 1,900,000 ha. Before the war, it was estimated that the damage caused by these torrents amounted to 500,000,000 drachmae.

To assure the protection of national soil, the checking of this danger has been entrusted to the foresters. In addition to this important task, the entire catchment area needs to be developed by establishing a normal hydronomic forest.

Prior to the war, considerable work had been done in damming torrents, construction, re-afforestation and returfing.

During the period 1949-52, when the Marshall Plan will be in force, the programs drawn up provide for the continuation of restoration work on the mountains. An amount of 400,000,000 drachmae, prewar value, will be allocated for this purpose, while the Ministry of Agriculture will finance re-afforestation operations to the extent of 20,000,000 drachmae (prewar value).

Forestry in Czechoslovakia

(*Extract from Czechoslovakia's Annual Progress and Program Report to FAO of* 1947-48)

The Czechoslovak forestry production of wood for construction and fibre does not fulfil the ever-increasing demand. Owing to the neglect of young stands during the German occupation, plenty of young trees are available for felling, but roads and mechanization are needed to provide means of access and transport.

The present wood production tendency is to reintroduce a normal standard of production after the excessive war-time tree-felling. Due to the bark-beetle invasion and to increased needs of timber, however, fellings still exceed the natural limits of Czechoslovak forest sources. A normal balance will be reached during the Five Year Plan, *i. e.*, before the end of 1953.

More saw-logs are to be produced to meet the large demand.

Economy in wood consumption in building and industries generally is enforced by special legal measures.

An extensive program is being carried out of reforestation and increased afforestation of non-forest land unsuitable for other purposes.

In the forestry research prngram, modern equipment is supplied to laboratories of experimental stations, more stations are being set up with increased numbers of trained specialists, and iving conditions of employees in forestry research and experimental work have been greatly improved.

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Sugar and sugar products were de-rationed in the Netherlands as from 5 November 1948, and the subsidy was also removed. The Netherlands at present produces only 70% of its current requirements.

VITICULTURE

Activities of the International Wine Office

On 3 November 1881 an **International Phylloxera Convention** was concluded in Berne. It was ratified by Germany, France, Austria, Hungary, Switzerland and Portugal. The objects of this legislation were :

the *inspection* of vines with a view to locating and destroying phylloxera ;

the *determination* of infected areas ;

the *regulation* of the transport and packing of vine cuttings, products, etc., in order to prevent the disease spreading ;

the *measures to be taken* in case of infraction.

At the XXVIIth Plenary Session of the I.W.O. Committee (1948), the Swiss delegate gave reasons why this Convention should be revised. A committee, proposed by the Chairman Mr Barthes, was nominated to draft and submit to the VIth International Vine and Wine Congress which will probably be held during the second fortnight of August 1949 in Athens, a project to be examined and eventually adopted by a diplomatic Conference.

O **An Inventory**, together with a limited catalogue, of the wines entitled to name-brands is also to be presented at this Congress. The following motion was taken at the time of the XXVIIth Plenary Session of the I.W.O. :

(1) " That it would be desiderable to request either FAO or I.T.O., or both organizations, to include in their agenda the study of practical means of promoting the protection of quality, especially that of wines from famous vineyards, on the world markets ; or else to convene an international conference for this purpose ;

(2) that a juridical and scientific study of the question be made by the I.W.O. with a view to defending by the best possible arguments the main principles recommended ;

(3) that, for this Conference, the member nations establish, endeavouring to reduce the number to the strict minimum, the list of brand-names interesting international trade and which should be protected on the world markets ;

(4) that it is advisable to continue preparing the inventory of brand-names defined by the motion of July 1947 according to the conditions laid down by same ".

O Each country has also been requested to present to this Congress, according to its own conception, but within the framework of the existing international agreements in regard to cartography, a **draft** small scale **viti-vinicultural map :**

O The conclusions of an exhaustive study regarding the establishment of an **international ampelographic register** are to be submitted to the Congress.

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200 tons of **Bulgarian** grapes arrived recently in **Sweden.** This is the first shipment after ten years interval which has left Bulgaria. (Free Bulgaria).

PLANT DISEASES AND INSECT PESTS

The ' take-all ' disease in England

An editorial in the " Fertilizer " of 20 October, 1948, comments on the recent appearance of ' *take-all ' disease in wheat and barley* in England. This disease has been the subject of much research, notably by Dr. S. D. Garret, who has worked on it both in South Australia and at Rothamsted Experimental Station in England. The fungus, which is not seed-borne and cannot therefore be control-

led by any of the many mercurial seed-dressings now available, survives in the soil, either in the root and stubble residues from a previous infected crop or on the roots of infected grasses. The disease occurs most frequently in lighter soils, especially those overlying chalk, and spreads along the the roots to the crown of the plant ; an early and severe attack may cause the plant's death.

Since a succession of cereal crops encourages the disease, it is possible to provide some measure of control by interspersing a root-crop between two straw crops. A high state of fertility will also help to combat the disease, and application of nitrogen in the form of sulphate of ammonia in the spring, and of phosphates, will contribute towards the plant's immunity. Grass weeds should be kept down to a minimum.

As the fungus survives in the soil, it is obvious that a wet spring and summer will favour the disease, whereas a cold winter followed by a dry spring will considerably reduce its incidence.

Reorganization of pest control in Italy

In Italy, it has been decided to set up a large number of centres for pest control which will be attached to the S.I.P.A. *Società Italo-Americana Prodotti Antiparassitari* (Italo-American Society on Antiparasitic Products) and which will receive the full support of the agricultural consortia. These Centres will be equipped with powerful modern machines for the antiparasitic treatment of tree and herbaceous crops, stables, farm houses, depots and storehouses for crops, mills, etc. Following the example set by other countries in this field, the Centres will give assistance to the farmers. The latter will thus have a smaller expenditure to bear than if they acted independently and all control operations would be effected under the best possible conditions and results would be positive. The first Centre has been set up in Campania and consists of three Stations.

A pest of the mulberry-tree

The Hungarian Sericultural Office and the Bulletin of the Italian Sericultural Office report that in Hungary, mulberry-trees have suffered severe damage by a small insect new to Europe and of American origin. This pest is a lepidopteron of the family Arotiidae, a white butterfly which in the larval stage (the larva is polyphagous), feeds on the leaves of various fruit-trees and also the mulberry.

The species, noted in Hungary since 1940, is called *Hyphantria textor* H. ; during the spring of 1947, however, butterflies with black spots were seen, classified as *H. cunea* Drury. This insect has two generations, one in spring and one in summer.

The usual insecticides cannot be used to spray the leaves as the silkworms would also be killed. The only means of controlling this insect is to cut and destroy the attacked branches round which the larvae, from groups of 300 to 600 eggs, are attached in a silky nest.

Biological observations and experiments require to be made in order to determine the biology of this insect under European climatic conditions, and the eventual control methods.

Chestnut-trees in danger

Mr. Darpoux, Chief of Research at the Plant Pathology Station of France, in a report to the French National Chestnut Commission, described his visit to Italy to study a severe attack of *Endothia parasitica*. This parasite, orginally from Asia and which, in 40 years has destroyed all the American chestnut-trees, appeared in Italy in 1947. It has also been reported in Spain. In France, Mr. A. Gault, agricultural engineer, Secretary General of the National Federation of forest owners and foresters associations, gave warning of this danger in the 'Libération paysanne' (national organ of the General Confederation of Agriculture, 25 November 1948). He stated that an investigation is now being carried out in order to ascertain whether this pest has already been introduced into France, and requested all proprietors of chestnut-groves to assist by reporting to the forest officers, all abnormal or suspected cases.

Endothia parasitica causes rapidly developing cankers on the trunks, branches or shoots, with subsequent withering of the upper parts. The first stage consists of a slight yellow swelling, which subsides somewhat and turns a brownish colour. Shortly afterwards fungus fructifications appear in the form of reddish orange pustules. Very frequently, numerous young shoots arise at the base of the canker giving the tree a characteristic aspect. Affected trees die off in a few years ; the parasites spread rapidly and chestnut-groves are completely destroyed.

The results of this investigation will be presented to the National Chestnut Congress to be held in Brive on 6-8 May next.

HORTICULTURE

Belgian horticulture

(*Abstract from the Belgian Report presented to the IVth Session of the Annual Conference of FAO*, 1948).

In Belgium, fruit crop investigations have been carried out since 1947 for the purpose of ascertaining the best varieties for each region of the country.

Attention has also been given to orchard improvement by establishing demonstration orchards for tall standards and model fruit groves for low standards.

The Upper Committee of Horticulture has been working mainly on the problem of horticultural instruction, transport possibilities, publicity and the protection of national production, and also professional organization which is urgently needed.

A Nursery Study Group is dealing with the organization and supervision of nurseries and the improvement of seedling production in general.

As regards flower-growing, the financial situation of the specialized enterprises in the Ghent-Bruges region has suffered severe losses owing to want of markets. New crops have been tried and a campaign has been organized to increase the sale of flowers locally.

In the plant protection sector, the activity of the phytosanitary service included numerous inspections of horticultural establishments and the issue of export inspection certificates.

Flowering bulbs in the Netherlands

As pointed out in the publication of the Ministry of Agriculture, Fishery and Food 'Dutch Agriculture Facts', bulb-growing is of great economic importance to Holland.

In 1946, the area grown to plants for bulb-production amounted to 15,845 acres — hyacinths, tulips, narcissus, gladioli, crocus, iris and others. In the same year, the bulb crop was excellent: early tulips — 4,455 kg. per acre, late tulips — 4,860 kg. per acre, hyacinths — 16,200 kg. per acre, narcissi and daffodils — 7,087 kg. per acre.

Investigations are being carried out at the Bubl Research Laboratory at Lisse; experiments are mainly directed at forcing the bulbs to flower outside the normal season so that the flowers can be transported to an environment differing from the one in which they are grown. Temperature is the most important factor. The diseases of flower bulbs are also studied.

Exports of flowering bulbs attained a maximum in 1938 with approximately 520,000 qls. Extremely reduced during the war (20,000 qls. in 1944), in 1946 they increased to about 300,000 qls.

RURAL WELFARE

Agricultural wages and welfare of the rural population in U. K.

(*Extract of the Annual Report of the United Kingdom to the* 1948, *Conference of FAO*).

After the meeting on 19th August 1947 of the Agricultural Wages Board for England and Wales, the new rates for men and women of 21 years and over are respectively 90/- and 68/- per week of 48 hours, except that in 4 areas where women's wages are related a 44 hour week; their minimum wage will be 62/-. In the case of casual and part-time workers, the rates are 1/11 per hour for men and 1/5 an hour for women. In the case of juveniles the weekly rates are for males aged 20 years, 79/-, aged 19 years 72/- and aged 18 years 65/- and for females aged 18 to 20 inclusive 63/- (for a 48 hour week) with proportionately lower rates for younger workers. The new overtime rates for men are 2/4 on weekdays (other than on the weekly short day) and 2/10 on the weekly short day Sundays and Public Holidays; the corresponding overtime rates for women being 1/9 and 2/2. In the case of benefits or advantages the values of board and lodging for a 7 day week will be for men 30/- and for women 27/-, with lower values in respect of younger workers. The standard value for a cottage for the purpose of the minimum rates will be 6/- per week subject to the

provision for lower or higher values to be fixed by the Agricultural Wages Committee for particular cottages on application by employer or worker concerned that the standard value does not correspond with the true value.

Many of the measures described in the Annual Report, tended directly to improve the standards of living and general welfare of the rural population.

The Agriculture Act guaranteed prices and assured markets to producers ; established more satisfactory relations between land-lord and tenant, and in particular provided greater security of tenure for tenant farmers ; and inaugurated a smalholdings policy designed to provide a better career for agricultural workers on the land.

Priority is being given to the building of houses for the agricultural workers ; and supplementary rations are made available to them at harvest time ; assistance to the rehabilitation of the hill farming areas of the country. During 1947-48 advances were made by the Development Fund, for the rural industries.

Cooperatives in Hungary

(*Extract from the Bulletin of the Hungarian National FAO Committee*).

During the last 3 years the agricultural cooperatives in Hungary have made considerable progress.

Decree 8000/1948 of the Government of the Hungarian Republic, issued on 13 August 1948, regulates the establishment, object and working of the agricultural cooperatives. It specifies the aims of the cooperatives and instructs them to facilitate the methodical agricultural production of their members, to organize the power cultivation of the land owned by the cooperatives, to promote contract production. The cooperatives are also required to buy the necessary tools, to utilize and market agricultural produce, to manage and utilize the lands allocated through agrarian reform measures, and to cultivate their own or leased land. The agricultural cooperatives must naturally deal with other commercial branches. Not only new proprietors but also working peasants are now authorized to join a cooperative. All the agricultural cooperatives belong to the National Hungarian Centre of Cooperatives (MOSzK) which plays an important supervisory and guiding role in the setting up and operating of cooperatives. The MOSzK will decide the limits of the districts in which the representatives of the cooperatives will set up a district committee. These committees will form a National Committee of Agricultural Cooperatives by which they will participate in the general work of direction and formation of the national cooperative policy.

NEWS FROM AFRICA

Modernization plan for overseas France

The publication of the Ministry for Overseas France, ' L'Agriculture tropicale ' (Nos. 9-10, 1948), includes an abstract of the " first Report of the Committee for the modernization of overseas territories " of the general Commissariat for the modernizing and equipment plan. Lack of space prevents giving the abstract of this report in full, but the following data show the importance of this project for agriculture which is the predominant activity in the overseas territories.

The object of this plan is to increase agricultural production by a more rational and intensive utilization of the resources of the soil, adapted to the characteristics of the land so that, within the framework of a political, economic and social organization ensuring a fair return to the farmer for his work and with the use of new methods of cultivation, he will attain a higher standard of living through the increased value of his production.

To attain this object, the plan anticipates reinforcing the general structure of production and grading the products in order to concentrate efforts on those which are of capital importance from both an economic and social standpoint.

Agricultural development is very closely linked with general practical improvements from which all branches of production will benefit.

Research plays a very important part in these improvements and, consequently, also the organization engaged in the study of soils and plants.

The existing laboratories and stations will be regrouped around some specialized institutes equipped with civilian personnel and financially independent. The cost of setting up these institutes and the regrouping of the centres is expected to amount to 1,200,000,000 francs (932 million francs for the first five-year period).

Schools for the training of technicians and research workers, and the instruction of the ordinary workman to that of the engineer, will be installed ; 300 million francs will be required for this purpose.

For ' Equipment of Technical Services ' 1,706,000,000 fr. are allocated, including 372 million for the control of soil erosion and deteriora-

tion now threatening vast areas. A considerable amount has been reserved for hydraulic works which, in Africa, will permit the reclamation of 900,000 ha. (French West Africa and Madagascar). The cost of these improvements will amount to 13 milliard francs and will represent more than half the State investments in agriculture.

Pilot-establishments will be set up in order to show, on an industrial and commercial scale, the true possibilities of cultivation in the different climatic zones, the technical cultivation methods suitable for each zone, the preparation and processing of the product, the inclination of the different classes of the population to work on a cooperative basis in view of a better utilization of machinery. The sum provided for these establishments amounts to 4,410,000,000 francs.

For the re-organization of the mutual agricultural credit, 850 million francs have been provided for loans.

The development of the different branches of agricultural production has been studied from the standpoint of world competition, particular attention being given to the meeting of the essential requirements of overseas territories and the home country.

Agriculture

The necessity of ensuring a regular and abundant food supply to the native populations, and specialized production of certain regions according to soil type, have obliged some countries to increase the cultivation of food crops.

Rice is the most suitable crop for conditions in Madagascar and Black Africa. It is expected that, at the end of the ten-year period, the quantity of rice for the requirements of Black Africa will reach 145,000 tons. This production may subsequently be increased to 165,000 tons.

In Madagascar, the area grown to rice will be increased from 507,000 ha. to 800,000 ha. and the output of 700,000 tons to 1,250,000 tons, thus permitting exports on a small scale.

Particular attention will be given to the production of oil yielding crops, especially, groundnut, oil-palm and karité. It is expected that groundnut production will attain 1,135,000 tons unhulled, as against 600,000 t. before the war. Of this quantity, 950,000 tons either hulled or crushed, will be available for export.

At the end of the ten-year period, if the plantations are established in French Equatorial Africa and Dahomey according to program, exports of palm-oil are expected to amount to 130,000 tons as against the present 36,700 tons. Palm kernel production will be maintained round about 150,000 tons. Karité production will be increased from 9,000 to 50,000 tons by intensifying and rationalizing the exploitation of natural stands.

Among the textile crops cotton is the most suitable and considerable progress has already been made in French Equatorial Africa ; this crop will be cultivated in Cameroun and French West Africa.

Priority is given to rice, oil-yielding crops and cotton but, if means permit, bananas, coffee and cacao will also be included in the program.

Sugarcane, although it is practically the sole resource of three of the French overseas departments, is not included in the overall program. In addition, the Commission does not mention some important crops — vanilla, essential oils, spices, etc. — but 10 per cent. of the funds, foreign currency and money coupons, anticipated for the execution of the program, will be reserved for profit-yielding undertakings concerned with these crops.

The question of maintaining or setting up a reserve stock of 20,000 tons rubber per year in French Africa was raised, but the Commission stated that it was not qualified to deal with this matter and recommended referring it to the authorized National Defence organizations.

Stockbreeding

At present the livestock situation in overseas territories is poor. Cattle and sheep only represent 7 per cent. of the French stock, and pigs and horses 1 per cent. France produces eight times more meat than overseas territories ; it is necessary, therefore, to expand stockbreeding for social and economic improvement. The following measures are planned :

Instruction by veterinary surgeons and specialized stockbreeding agents. Two veterinary science schools will be set up in Black Africa and Madagascar.

Healthy livestock production will be ensured by numerous immunization and treatment centres (in Madagascar, 40 per cent. of the cattle are tuberculous, and 15 per cent. of the pigs have measles).

Stockbreeding enterprises will apply and propagate the results of the animal husbandry experiment stations and direct government aid to the most unfavoured sectors.

Improvement of conditions by pastoral hydraulic works and stockfeeding experiments.

The funds allocated for these objectives, to be carried out over a period of 10 years, will amount to 3,155,000,000 French francs.

Private initiative will finance the exploitation of animal products, setting up cold stores, tanneries, etc.

The first five-year period will absorb two-thirds of the total expenditure. The funds will be divided as follows :

Instruction and research	22%
Sanitary protection	11%
Stockbreeding enterprises	13%
Hydraulic works	42%
Stockbreeding and animal products	12%

French West Africa will be allocated 47 per cent. of the total funds, French Equatorial Africa 12 per cent., Madagascar 12 per cent. and Cameroun 9 per cent. Compared with the total expenditure of 3,155,000,000 francs, the revalorization figure of the herds discounted in 10 years will amount to 5,590,000,000 francs, *i.e.*, 11 per cent. of their value. Taking everything into consideration, it is expected that the application of the Plan will bring a net gain of 1,700,000,000 francs, or, in other terms, over 50 per cent. of the amount expended.

Goverments Meet in Africa to Plan New Attacks on Rinderpest

New advances against rinderpest – the dreaded 'black plague' of cattle which has brought many a farmer to disaster – are hoped for as the result of a five-day meeting of scientists, representing governments, which opened in East Africa on 28 October 1948.

Rinderpest is probably the world's worst disease of livestock. It is a virulent eruptive fever which develops so rapidly and attacks so many animals that from the earliest times it has excited terror and dismay.

Striking especially in Asia and the Near East, rinderpest causes the greatest loss of animals – more than two million head of buffalo and cattle each year. In some countries an outbreak may kill so many work animals that farm production is greatly hindered. Actual famine has resulted from wide-spread epidemics.

Fifteen countries where rinderpest is a constant threat to farm production (either in the countries themselves or in their colonial areas) were invited to an FAO-sponsored meeting in Nairobi, Kenya. The delegates were veterinarians or other specialists in animal diseases, as the chief purpose of the meeting was to provide for an exchange of technical information on new serums and vaccines and on newest methods for control of rinderpest in all countries afflicted.

Dr. K. V. L. Kesteven, veterinarian on the headquarters staff of FAO, had general charge of the meeting. Dr. Kesteven previously made a round-the-world trip, visiting governments and veterinarians, learning and talking about new advances in veterinary science. In all countries he found a growing realization of the importance of animal disease control in relation to the general problem of increased farm production. He found, also, a definite need for an exchange of information between countries so that all might benefit from research work, wherever done. It was to help in meeting that need that FAO called governments together at Nairobi.

Discussion centred around four principal vaccines developed for rinderpest control. Papers were presented by Dr. R. Daubney of the Serum Institute, Cairo, Egypt, on goat virus vaccine, and by Dr. S. C. Cheng, Director of the National Animal Industry Research Bureau, Chinese Ministry of Agriculture and Forestry, on lapinized (rabbit) vaccine and avianized (chick embryo) vaccine. There was also a discussion on tissue vaccine.

Following four days devoted to consideration of the good and bad points of each vaccine, the final day of the meeting was given over to a comparison of the uses of each vaccine under various circumstances, to the cost of eradication programs, and to the possibilities of international cooperation in research, field control, and maintenance of stocks of vaccines for emergency use in countries not now afflicted. Stress was laid on the fact that rinderpest is no respecter of international boundaries, and that complete control is possible only if governments work together in a coordinated program.

Governments invited were Belgium, Burma, China, Egypt, Ethiopia, France, Great Britain, India, Liberia, Netherlands, Pakistan, Portugal, Philippines, Siam, and the Union of South Africa. An invitation to send a representative was extended to the International Office of Epizootics.

Dr. Richard E. Shope, consultant to the Research and Development Board of the United States, attended as an observer on behalf of the Board, and in the interest of the United States Department of Agriculture. Dr. Shope was a key figure in the development of avianized (chick embryo) vaccine at Grosse Ille, Michigan (U. S. A.), during the war. The work at Grosse Ille was precautionary, based on a fear that the Germans might resort to bacteriological warfare and attempt to spread cattle plague. The United States and Canada set up a laboratory to find a better vaccine to fight rinderpest if it ever broke out in America. Working on an island in the St. Lawrence so as to guard against an escape of the virus into the U. S. or Canada, Dr. Shope and his associates developed a means of producing the vaccine by cultivating the virus in eggs. One result has been introduced by FAO, of a new method of producing vaccine in China, where it is hoped that 15 million head of cattle may be inoculated. It is hoped that in the next few years enough vaccine may be produced to clear China of rinderpest, and that additional quantities may be made available to other countries.

The FAO meeting followed immediately upon a conference in Nairobi which considered problems of control of rinderpest in Africa. That conference opened 19 October under auspices of the British Colonial Office. FAO cooperates with the Colonial Office so as to coordinate their two programs.

Stockbreeding in Algeria

The '*Secteurs d'Amélioration Rurales*' = SAR (Rural Improvement Sectors) set up in recent years in Algeria aim not only at increasing grain production, improving truck crops, fruit-tree growing, viticulture and olive-growing, but also at raising the standard of Algerian stockbreeding which, since 1945, has been in rather a difficult position. Forty-one stockbreeding sectors are now operating in the northern areas of Algeria, including 20 which started about a year ago, the other sectors having been established in accordance with the decision of the '*Paysanat*' Committee of the Government General on 25 November 1947.

Owing to several years of continued drought the sheep flocks suffered severe losses, frequently attaining and even exceeding 4/5 of the flock. Progress in restoring the flock numbers is very slow as the owners, being short of funds, sell to the abattoirs, at profitable prices, all animals in good condition, including the ewes.

The wool is mediocre in quality, nearly all the fleeces being kempy. The practice of common-land grazing leads to an almost continual impoverishment of the useful pasture flora, and the animals are watered under faulty conditions, because in many regions the watering places are wanting or too widely separated. Primitive methods are still followed in sheep-farming and no attempt is made to protect the sheep from disease, particularly against scab, intestinal worms and sheep-pox. The cultivation of forage plants and the keeping of reserve feed stocks are unknown. The stockbreeding 'SAR' were organized in order to remedy this deplorable state of affairs.

In North Algeria, the 'SAR' which cover 5,937,741 ha., are part of the land owned by the Native Provident Society ('SIP'), veritable districts comprising at least one douar, but more often, two or three, and which, in the final stage, will group all the stockbreeders in the surrounding area. The organization of these centres aims at building up sheep stocks and improving them both in quality and quantity.

To enable small stockbreeders, partly or entirely ruined, to build up their sheep flocks, loans in the form of animals, returnable in 5 instalments, have been granted. In general, these flocks on loan should not comprise more than 20 ewes and one ram for stockbreeders having no animals of their own left. In other cases, the difference between the stock owned and the above number is increased.

The improvement of the flock is effected n two phases: the immediate introduction of pedigree rams, of a well adapted type, capable of improving the quality and quantity of meat, but more especially the quality of the wool; and breed selection. This program will be continued for many years; the poor type rams will be castrated and more prizes will be given annually by the Flock Commission to breeders presenting rams of the required type.

Within each 'SAR' area one or several centres will be established where all flocks (including the animals loaned to breeders by the 'SIP') will be assembled and periodically inspected by the district stockbreeding inspector. This inspector will carry out or supervise such operations as inoculation against sheep-pox, sheep-dipping, castration of inferior rams. A centre of this type is already in operation at Chabounia, the only 'SAR' of Boghari, which was the first to be organized. 4000 sheep can be treated daily for scab in a dipping-tank nine metres long by one metre. The centre also comprises a yard for grading the sheep, two catch pens, two drying pens, a vaccination station, housing accomodation for the stock assistant, a well and a watering-trough.

Some pastures having a rich grass cover are not much used owing to inadequate watering facilities. This situation will soon be remedied by reconditioning the existing watering places and establishing others. Six watering places have been put into order in the Boghari 'SAR' with the assistance of the hydraulic and settling services.

In order to improve pasture quality, the first measure in view is the protection, in each 'SAR', for a period of 3 to 5 years, of extensive areas of grazing land used to date as common pasture. These zones will subsequently be sown to annual and perennial species, and planted with jujube-trees, cactus and acacias.

In all districts where water can be economically used for irrigation, suitable forage crops capable of producing a high yield in dry matter, will be cultivated. To this end, the construction of barrages for the distribution of flood water, is being given close attention. The forages obtained locally could be dried and stored as reserve. It is anticipated, however, that it will be possible to transport by rapid means, prime feedingstuffs grown in the irrigable areas of the north, to the stock-breeding regions, in years of exceptional drought

(*Documents algériens* published by the '*Service d'information du Cabinet du Gouverneur Général de l'Algérie*'. 'Série économique', No. 39: "*Paysanat*").

Alfa industry in Algeria

(*Excerpt from a report by M. de Beaucoudrey, Government Inspector for Forests*, Documents Algériens, *published by the 'Service d'Information du Cabinet du Gouverneur Général. Série Economique'*, *No.* 24, Forêts, Alfa, 1 *May* 1947).

A perennial wild grass, limited to the sub-west Mediterranean area, alfa grows in abundance on the North African uplands. The North African alfa area which covers approximately:

4 million ha. in Algeria;
2 million ha. in Morocco;
1,200,000 ha. in Tunisia;

may normally produce

in Algeria	250,000 tons
in Morocco	125,000 »
in Tunisia	75,000 »
Total	450,000 tons

The greater part of the 4 million ha. of alfa in Algeria belong to the State and the communes, only some 50,000 ha. being privately owned. So only about 3 million ha. have been exploited, one million ha. remaining more or less unproductive, owing to their distance from roads and railways, labour shortage or because of the poor condition of the stands.

Alfa leaves, which contain 48 to 52 per cent. cellulose, are a prime raw material for paper manufacture. Alfa pulp compares well with the best chemical wood pulps; owing to the high absorbent power of the cellulose, alfa is extensively used for making filter paper. At the same time, it seems that it could be employed to a much larger extent in the manufacture of vegetable fibre.

England, which established the alfa industry in 1865, ranks first in this field. The paper-mills annually treat 350,000 tons of crude alfa obtained from North Africa, together with a small quantity from Spain. The alfa industry subsequently extended to France (which as yet only utilizes one tenth of the alfa production of its North African territories) and to Italy.

In Algeria, an alfa cellulose and paper manufacture industry is in process of formation. This industry will benefit considerably by having the mills set up in the production zones, as this arrangement will facilitate obtaining the raw material and eliminate the long distance transport costs which increase the price of alfa. From this two-fold aspect, the large scale operations undertaken by the Hydraulics Service with a view to increasing the water resources of Algeria, and the working of the coal mines of Kenadsa and Colomb Béchar, have contributed to creating a favourable position for the alfa industry in Algeria. Alfa paper-mills projects due to the initiative of several companies, including the North African Cellulose Company, are being put into effect, two mills in the outskirts of Algiers, and a third in the Bougie region. When normal efficiency is attained, the three mills will be able to treat annually 35,000 tons of alfa, representing an output of 14,000 tons of pulp.

Stimulated by the revival of dealings with England and the prospect of fresh markets, the alfa industry is regaining its pre-war level. The annual crop which, since 1941, had fallen to some 20,000 tons, compared with an average of 170,000 tons during the period 1931-40, had already risen to 120,000 tons last season (July 1946-February 1947). The demand could absorb 200,000 tons, namely, 80,000 tons for domestic requirements in Algeria and France, and 120,000 tons for export.

FAO ACTIVITIES

FAO's Director-General conferring in Europe

Mr. Norris E. Dodd, Director-General of FAO, arrived in Rome on 25th January 1949, on an across the-world trip through Europe, the Near and the Far East.

During his three months' official trip the Director-General intends to visit thirteen of FAO's 58 member countries, conferring with government officials and learning at first hand of the problems which impede increase of production and improved distribution of agricultural, forestry, and fishery products. Major problems to be discussed with European officials were restoration of the livestock industry, re-establishment of trade between Eastern and Western Europe and increased output of forest products.

Before coming to Rome Mr. Dodd had similar discussions with the United Kingdom and Portuguese officials. His itinerary also included Spain, in connection with problems common to the Iberian Peninsula. In Lisbon, Mr. Dodd was joined by Mr. Albert Van Houtte, Secretary of the European Regional Office of FAO who accompanied him to Rome.

While in Rome, the Director General of FAO was received by Mr. Luigi Einaudi, President of the Italian Republic, and by Msgre Gianbattista Montini, Acting Secretary of State of the Vatican. On behalf of the Italian Government, Mr. A. Segni, Minister of Agriculture, Mr. Vittorio Ronchi, High Commissioner of Food, had talks with Mr. Dodd on problems concernig Italy; and an exchange of views with the Italian National Committee of FAO took place. European problems were the subject of consultation between Mr. Dodd and Mr. A.H. Boerma, Personal Representative of the Director General of FAO in Europe, in which the other FAO experts assigned to the European Regional Office of FAO in Rome took part.

On 29 January, Mr. Dodd left Rome for Istambul, Ankara, and Cairo.

In Cairo, Mr. Dodd will confer with M.T. Hefnawy Pasha, FAO Regional Representative for the Near East, and government officials from member countries on problems of irrigation and drainage, insect control, improved seeds, and more adequate supplies of fertilizers and other agricultural requisites.

The greater part of Mr. Dodd's tour will be spent in Asia. The Director-General will open the first meeting of the International Rice Commission at FAO Far Eastern Headquarters in Bangkok on 7 March. Similarly, he will open the first organization meeting of the FAO-sponsored Indo-Pacific Fisheries Council in Singapore on 24 March. There is a possibility, too, that Mr. Dodd may be able to spend some time at the International Forestry and Timber Utilization Conference for Asia and the Pacific which opens under FAO auspices, with India as the host government, in Mysore on 28 March.

While in Bangkok, Mr. Dodd will have opportunity to confer with William H. Cummings, FAO Regional Representative for Asia and the Far East, on plans for furthering the work of this newly established FAO office to serve the Far East.

Other member countries Mr. Dodd will visit are Australia, Burma, China, Pakistan, the Philippines.

In the Far East, attention will centre on the principal agricultural problem in that great area; that is, increased production within the region itself to overcome the food shortage. Mr. Dodd will meet with representatives of the United Nations Economic Commission for Asia and the Far East, which is working jointly with FAO in discovering and reporting on the need for agricultural requisites. Major problems to be discussed with government officials include means for financing projects, control of animal disease, improved transport, and betterment of the nutritive value of rice and rice diets.

The Director-General will return to Washington in time to discuss the results of his tour with FAO staff members and to prepare reports for consideration of the Council of FAO at its first 1949 meeting, scheduled for 13 June in Paris. The information gathered by Mr. Dodd will play an important part in the preparation of a preliminary program of work for 1950 which will be placed before the Council at its Paris meeting.

Travelling with Mr. Dodd are M. Veillet-Lavallée, special Assistant to the Director-General; Joseph L. Orr, Assistant Director of FAO's Distribution Division and Assistant Secretary-General of the International Emergency Food Committee; and Morris Greene, FAO Conference Officer.

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Sir John Boyd Orr, former Director General of FAO was made a baron of the United Kingdom in the New Year's Honours List for 1949. The European Regional Office of FAO in Rome wishes to associate itself with all those who congratulated this eminent scientist and untiring sponsor of international cooperation in agriculture and nutrition on the new acknowledgment of his work.

FAO Staff visits in Europe

Mr. A. H. Boerma, Personal Representative of the Director General of FAO in Europe, with Mr. Albert Van Houtte, Seecretary of the European Regional Office of FAO in Rome, and three other technicians of the European Regional Office are making an official journey to Switzerland and Czechoslovakia in order to reach better coordination of FAO's work with the national programmes. Such visits of FAO staff are intended to intensify FAO activities in the direction undertaken by the European countries, through closer personal contacts and greater exchange of ideas. FAO needs constructive criticism from its member governments and wants to get to know at first hand their objectives in agriculture, nutrition, forestry, marketing and other related fields.

The first of these meetings began in Berne, on 13 January, by consultation with the Swiss National FAO Committee, under the chairmanship of Professor Wahlen, President of the Committee and in the presence of Secretary Keller, Deputy Director of the Division of Agriculture. An over-all survey of Swiss agriculture was given and stress was laid on the importance of the federalist system in the national life. Mr. Boerma set forth the immediate aims of FAO and underlined the aims of this staff meeting; then an exchange of views with the Committee members on all branches of FAO activities took place. The visitors were afterwards received by Mr. Petitpierre, Councillor of the Swiss Political Department. They also gave a Press Conference.

Afterwards Mr. Boerma and his staff left to continue their consultation in Czechoslovakia, where the Delegation was given a warm welcome, and talks with representatives of the Czechoslovak Government started immediately. Dr. F. Vanicek, Director of the Institute for International Collaboration in Agriculture and Forestry in Prague, Dr. Jan Tauber, Deputy Director of the same Institute and at the same time Secretary-General of the Czechoslovak National FAO Committee, Dr. J. Šebeš, the Czechoslovak Delegate to the Economic Commission for Europe and many other experts and technicians took part in the discussions. Mr. Boerma was received by the Minister of Agriculture Mr. J. Ďuriš. The delegation visited various centres of interest in the country, such as a State Farm which houses a grain selection centre, a large poultry farm and an artificial insemination centre, as well as one of the oldest cooperatives founded in 1905 and a modern Grirls Training School, a detailed description of which will be given in No. 2 of this Bulletin. All the arrangements for meetings with experts and visits to different centres of interest were most ably managed by Miss Jarmila Elsnerova, also of the abovementioned Institute and the Delegation departed after a week of useful talks on economics, statistics, forestry, rural welfare, agriculture, nutrition fisheries and information, feeling the richer for these valuable and constructive contacts.

In the first days of February 1949 similar consultation was continued in Ankara where the FAO delegation was received by President Inonu ; the Turkish authorities showed great interest in this work. On 8 February the FAO delegation proceeded to Athens to continue their visits.

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Dr. Horace Belshaw, a New Zealander, has been appointed Director of FAO's Rural Welfare Division, N. E. Dodd, Director-General of the Food and Agriculture Organization of the United Nations has announced.

FAO's Rural Welfare Division is one of the Organization's newest divisions concerned with program operations.

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The FAO European Regional Office regrets to announce the death in October 1948 of Mr. Hugh G. Calkins, former Chief of its Field Services. Many European experts on land reclamation, food production and agricultural economics who learned to know him on the occasion of his several official trips through Europe, greatly appreciated his wide expert knowledge, and the charm and candour and understanding of his character. Our readers will remember his outstanding article on " Better Land Use, an International Problem ", (No. 3, page 192, of " Food and Agriculture ").

Mr. Calkins, born in 1884, had extensive experience in soil and water conservation in Arizona, Colorado, New Mexico and Texas, and served as the representative of the Soil Conservation Service on the Inter-Departmental Rio Grande Board, which was commissioned with the development of the entire watershed of the Upper Rio Grande. In 1943, he joined UNRRA as Deputy Chief, Bureau of Supply in the European Regional Office in London. In February 1945 he was appointed Chief of the UNRRA Field Services Branch with Headquarters in Rome ; when the Service was merged with FAO in April 1947, Mr. Calkins carried on its work until December 1947.

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Mr Valentino Dore, born in Florence 10 May 1886, Doctor of Laws, Rome University, was a member of the staff of the International Institute of Agriculture from 1909 to 1946, year of the dissolution of the Institute and the transfer of its functions to FAO. Head of the Statistics Bureau as early as 1923, he frequently replaced the Secretary General in the direction of the Institute and took part in many international meetings in behalf of the International Institute of Agriculture. He collaborated personally in the preparation of numerous publications of the Institute.

After the dissolution of the International Institute of Agriculture he was appointed Statistical Adviser to FAO at Headquarters in Washington. He died on 24 November 1948 at the close of the IVth Session of the Annual FAO Conference.

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The first head of the FAO Division of Agriculture, Doctor G. Scott Robertson died late in 1948. He was a distinguished chemist and had done significant research in applied agricultural technology. Former Professor of Agricultural Chemistry and Dean of the Faculty of Agriculture of Queen's University in Belfast (Northern Ireland) he joined the Ministry of Agriculture and in 1933. Le was appointed Permanent Secretary of the Department of Agriculture of Northern Ireland. After FAO was founded, his Government released him for temporary service with FAO to become its first Director of the Division of Agriculture.

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We regret to announce the sudden death, during the sessions of the International Meeting on Hybrid Corn in Rome, on 10 January 1949, of the Egyptian delegate, Doctor Abdel Ghaffar Selim. The deceased studied agriculture at the Cairo and Cambridge Universities and was Director of the Plant Breeding Station at Gizah. He was in charge of plant breeding, undertook much important research work and wrote a series of scientific studies, in particular on chromosomes of rice and hair tests of cotton.

The delegates, deeply moved at Doctor Selim's unexpected demise, asked the Chairman of the Meeting to express their sympathy to his family and to the Egyptian Government.

Mr. Abdel Hamid Galal Mehrez, Chief of the Maize Cultivation Department at Gizah, the other Egyptian delegate, continued to carry on with the work of the Conference.

Fourth Annual Conference of FAO

The FAO Fourth Annual Conference of the 58 members countries which was opened in Washington's Shoreham Hotel on 15 November 1948 — closed on 29 November 1948 with the adoption of a series of recommendations designed to hasten world-wide increases in the output of farms, forests, and fisheries.

Before adjournment, more than 350 delegates and observers heard from the Conference Chairman, United States Secretary of Agriculture Charles F. Brannan, that the session had made ' genuine progress ' toward achieving the goals of FAO.

Reviewing and complimenting the work of earlier Conferences and of the Preparatory Commission on World Food Proposals, Chairman Brannan said that the present Conference ' has made substantial additions to what has gone before '.

' It has set in motion', he said, ' work on commodity studies and agreements which should do much to promote an abundant flow of food in the channels of international trade and security for both producers and consumers '.

On motion of the United States delegation, the Conference paid a sincere tribute to FAO's first Director-General, Sir John Boyd Orr.

During the two-week session the Conference admitted Saudi Arabia to membership ; referred the application of Israel to the FAO Council for further consideration ; admitted the Holy See to the status of permanent observer ; deferred action on a permanent site for the FAO pending further study by the Council and a report, preferably to a special session to be called by the Director-General ; selected Havana as the seat of its next Conference and tentatively fixed 19 November as the opening date ; voted to set up a special committee to review the contribution scale of the member nations ; took steps looking toward the creation of intergovernmental commodity agreements after hearing a pledge of support from President Truman of a new International Wheat Agreement.

The Conference renamed Viscount Bruce of Melbourne to the Independent Chairmanship of the FAO Council, and re-elected Australia, Denmark Egypt, France, India, and Mexico to seats of the 18-government body.

At opening plenary session the Conference, in addition to choosing Secretary Brannan as Chairman, named V.K. Wellington Koo, the Chinese Ambassador, as First Vice-Chairman ; Senator Jose Manuel Casanova of Cuba as Second Vice-Chairman, and James M. Dillon, Minister of Agriculture of Ireland, as Third Vice-Chairman.

Early in the session the Conference resolved itself into three Commissions, where the bulk of Conference was done. Commission I, under the Chairmanship of Lord Bruce, dealt with the world food situation ; Commission II, with B. R. Sen. of India as Chairman, with the technical program of FAO ; and Commission III, under the Chairmanship of Arthur Wauters of Belgium, with financial and administratives matters.

At the closing plenary session, the Conference formally adopted the reports of these three Commission, thus giving the reports full Conference sanctions, and giving them the authority of Conference recommendations.

Following are summaries of the three Commission reports :

Commission I

(World Food and Agriculture Situation)

The Conference noted that the year 1948 has been particularly favorable to agriculture. It called attention to the fact, however, that the great improvement in recent months in the world food situation may too easily engender a false sense of security. It gave three reasons for this growing danger :

1. This year's harvest was far above what could be expected in an average year.

2. The increased dependence of the world on supplies from North America increases the element of risk because of the extreme fluctuations of output which may occur in the United States and Canada.

3. World stocks of food have been cut to the barest minimum, and will still be low at the end of 1948-49, so that the world will again depend on the luck from next year's harvest.

The Conference found that cereals had reached a virtual equilibrium between exportable surpluses and effective demand. It estimated provisional grain import programs for the year July 1948/June 1949 at 40.1 million tons The estimated exportable supplies for the same period were 39.7 million tons.

As to sugar, the Conference found the situation has changed from one of shortages and allocations to one raising fears of future surpluses.

The rice situation was considered not so favorable. A gradual improvement has been halted by failure of the monsoon in South India and by political and economic disturbances in some Far Eastern countries.

Production of oils and fats has reached the pre-war level, but consumption in deficit regions, especially in Europe, remains well below pre-war levels.

The livestock industry in the Northern Hemisphere, the Conference observed, anticipates a substantially increased output as a result of the much improved supply of feed cereals.

European milk production has increased on account of the good grass situation, and by the second half of 1949 the output of meat should be larger both in Europe and in North America.

The Conference reported the supply of textile fibers in general adequate to meet effective demand, but found the output of forest products still insufficient in the face of greatly expanded demand.

Improvement in the food situation, it was noted, has enabled many governments to relax or abolish controls.

The consensus was that increased agricultural production and improved consumption can only be achieved within the general pattern of an expanding world economy. The Conference concluded, therefore, that in many countries the development of industry and higher output per man are prerequisites to the attainment of FAO's objectives.

Five regional sub-committees of Commission I prepared reports on production and consumption problems in their areas, *i. e* for Europe, the Near East, Africa, the Far East, and Latin America, which were adopted by the Conference.

The European Sub-committee recommended that the Director-General report to the next Conference of FAO on present and prospective supplies of cereals and oil seeds in Europe. The report was to stress the economic, agricultural, and other factors limiting European cereal and oil seed production and importation. Special emphasis was placed on the possibilities of rebuilding trade in cereals and oil seeds between the Eastern and Western countries of Europe.

The Committee endorsed the FAO program looking toward European meetings for the exchange of technical information. The FAO program for European activities directed toward increasing the output of livestock products in Europe was commended. It was recommended that each European country work toward the maximum use of resources available for livestock production. Action undertaken jointly by FAO and the Economic Commission for Europe to improve transport and storage of perishable products was also endorsed.

With respect to forest products, the Committee approved the organization of a preparatory conference on world wood pulp problems. It recommended that FAO continue to promote intergovernmental discussion and action looking towards an adequate and well-distributed supply of fertilizers in Europe. The development of national centers for research in and demonstration of farm machinery was recommended. Cooperation with the International Labor Organization on problems of agricultural manpower in Europe was commended. The Committee endorsed the arrangements made by the Director-General for cooperation with the Economic Commission for Europe " as an example of a method of obtaining best results while avoiding duplication of International personnel and minimizing expenses both to FAO and to member governments ".

The Conference accepted and approved the IEFC recommendation « that the system of international allocation recommendations be continued for the year 1948/49, with the understanding that the IEFC will remove commodities from the Reserved Commodity List as soon as it appears that no useful purpose is served by continuing them under allocation recommendation ».

The Conference requested the Council of FAO to study the trends in the pattern of international trade in food and agricultural products and submit a report at the next session of the Conference.

In the course of discussions of intergovernmental agreements, it was announced to the Conference that the wheat preparatory committee would meet as soon as possible to arrange for a resumption of the wheat conference, possibly on January 25, 1949. The Conference noted with satisfaction this development, and expressed the view that FAO should encourage the continuation of multilateral negotiations, looking toward intergovernmental agreements on single commodities such as wheat and sugar.

It was pointed out that problems associated with commodity agreements are not widely understood and that some misapprehension exists in the minds of consumer and producer groups with regard to prices. In this respect, it was stressed that stability is the main objective rather than any particular level on prices.

Commission II
(*Work of FAO*)

Commission II dealt with the technical work of FAO, and reviewed the organization's work of the past year and its plans for 1949. The report of commission, as adopted by the full Conference, expressed satisfaction with last year's work and approved the program of work for 1949, subject to the addition of several projects which the Commission felt should be undertaken during the year.

The new projects, which had not been covered in the program of work originally proposed by the Director-General, included foot-and-mouth disease control work, a survey of existing facilities for international reporting of outbreaks of plant and animal diseases, establishment of a consultative service to governments on cooperatives, and continuance of the agricultural library at Rome.

In a general statement of policy, the Conference recommended that "in determining the order of priorities for particular projects FAO should give the greatest weight to those which contribute to the welfare of the greatest number of people. While, therefore, regional and national projects provide an important field for FAO's work, those projects with world-wide effects should obviously be given precedence".

The Conference noted that more than 65 countries have indicated to FAO that they are carrying on preparatory work for the 1950 World Census of Agriculture. It recommended that countries which have not completed their arrangements for such a census do so, and that FAO give assistance on request. Publication of an annual yearbook covering both production and trade in agricultural products and continued publication of a monthly statistical bulletin were recommendel. The Conference recommended that FAO as rapidly as possible make staff members available to assist governments in the development of "forward looking production, consumption, and trade targets and programs".

The Conference recommended that FAO should "take early steps to assist national governments to improve inland fisheries along with coastal fisheries", and also should help in the supply of requisites essential for fisheries production. Preliminary work looking to an international code defining standards for certain fisheries entering international trade was requested.

The Conference urged that member governments and the FAO secretariat cooperate in improving distribution of the organization's publications and that efforts be continued to supplement technical programs that require wide public understanding with public information through all appropriate channels. It was recommended that the agricultural library at Rome continue in operation and an offer of collaboration made by UNESCO to that end was provisionally accepted. The Conference asked the Director-General to report on long term publication policies, and subject to adoption of this policy urged that present periodical publications, including the European FAO Bulletin, be continued. It also expressed the hope that special bulletins for Latin America and the East be issued as soon as possible.

Commission III

(Financial and Administrative matters)

Commission III, devoted the greater part of its deliberation to a discussion of a permanent headquarters for FAO.

Three sites were definitely proposed, Rome, Copenhagen and Washington. In addition there was some sentiment expressed in favor of Geneva and New York. During the course of the debate a letter was received from the Secretary General of the United Nations offering to provide space for the FAO in the United Nations headquarters in New York.

After disposing of a number of routine administrative matters such as the approval of the accounts of the previous year, approval of number of minor amendments to the financial rules and regulations, etc, the Commission embarked on a discussion of the scale of contributions of the various member nations. It was the consensus of the delegates that contributions should be scaled down, but at the same time they were in agreement that the work program of FAO should not be curtailed. The problem of how to reconcile these two points of view occupied much of the time of the Commission.

It was finally decided to set-up a Financial Sub-committee to look into the question as well as the other knotty problem of hard-currency contribution.

The Commission also discussed a number of other matters such as the question of diplomatic privileges and immunities, relationships with other International Organizations such as the WHO and UNESCO, the setting up of an administrative tribunal, and adopted the budget for 1949.

Work of FAO 1947-48

The 90-page report of the Director-General of FAO, Mr. Norris E. Dodd to the Fourth Annual Conference — 'The Work of FAO, 1947-48' — notes that the end of the third year of FAO's life finds the nations working together to increase the output of the world's farms, forests and fisheries. International cooperation of this sort, though as yet 'halting and imperfect,' is a reality.

In the year since the FAO Conference last met at Geneva, the Director-General reports, three trends of particular note were in evidence.

First, the drive for increased production, which has been and probably will continue to be the dominant note in national and international plans, carries a danger for countries already at a high production level. Unless steps are taken to achieve orderly marketing — the aim of the proposed wheat agreement, for example, which failed of ratification last year — producers of some important agricultural commodities in those countries are likely to face trouble as world production increases.

Second, the year saw a marked trend toward decentralization of FAO operations as specific problems were attacked in specific areas. This trend was seen in the FAO/UNRRA field activities and other special projects; in the holding of conferences on regional problems in agriculture, forestry

fisheries, nutrition and statistics ; in the setting up of small regional working parties, especially in cooperation with United Nations economic commissions ; and in arrangements for the work of FAO regional representatives.

Third, the development of a network of interrelated activities with other agencies was written into the year's record. Through the U. N. Economic and Social Council, FAO worked to hasten this development, with the double aim of avoiding duplication and of bringing all available knowledge and skills fully to bear on the world's problems.

An appendix to the Director-General's report proposes, for Conference approval, FAO's program of work for 1949. This program represents a screening of more than 400 projects which have been suggested. Under the proposed arrangement the organization will be engaged in a limited number of most important projects which give promise of effective international action. It will prevent the spreading of FAO's small resources too thinly over a huge field of less urgent proposals.

The broadly varied program includes work toward control of animal diseases and food infestation, development of information on little-known fishery resources, sponsorship of world-wide forestry conferences, aid to governments in fostering practical nutrition projects, and encouragement of extension work in agriculture. In the field of statistics, a major taskwill be to help member governments, organize the 1950 census of agriculture. Meanwhile, the organization's regular services to its member governments, including the publication of statistics yearbooks and special commodity studies, will go forward continuously.

' The Work of FAO, 1947-48 ', in English, and French is on sale at FAO sales agencies throughout the world at $1 per copy. A Spanish edition is in preparation.

Programme of FAO's Work for 1949

The ' Programme of Work for 1949 ' submitted by the Director General of FAO to the Fourth Annual Conference of FAO has been drawn up in the light of the following considerations : first, to determine the basic statistical and other information needed to decide where and along what lines action is needed ; secondly, to correlate and compare the policies, programmes and requirements which the Member-Governments have adopted in view of the available information ; and finally, to provide assistance, consultation and training in those fields where practial results can be achieved. The specific proposals, however, have not been based on actions limited to 1949 only ; they are made out in the light of a longer-term policy covering varying periods from 3-5 years in respect of different matters, as the result of the activities undertaken in 1949 will not be fully effective until a later date.

At the same time, the programme has been prepared in close relation to the draft Budget of the Organization.This will make it possible to concentrate on tasks that may bring about the needed results without channelling the activities into directions which could not fully be pursued owing to lack of funds.

The general and regular activities include the collection of statistical and other information by the various Divisions of FAO, the dissemination of this information to Member Countries, the handling of enquiries and applications for advice from Member Countries and from other international organizations, the preparation of material for the FAO Council and Conference, and the provision of service for the regional representatives.

In the following we list some of the special projects according to the various Divisions of FAO.

Economics, Marketing and Statistics Division : Statistical Style Manual, Handbook on Food Balance Sheets, Statistics Review and Clearance services, aiding Governments to improve their current statistics and organizing the world census of agriculture, statistical training school, survey of textile production and consumption in Europe.

Nutrition Division : Food composition tables for international use will be extended, methodology of diet surveys, food technology, physiological requirements. of calories and nutrient, international index of nutrition workers and institutions.

Agriculture Division : Improving animal production through breeding, reducing losses from animal disease ; soil improvement and classification, water utilization and control ; intensification of agricultural engineering, world catalogue of genetic stocks.

Rural Welfare Division – Study of Danish rural reform and advance, publication on Corporate Forms of Land Tenure.

Fisheries Division – Fisheries Statistics; monthly Bulletin, commodity studies, establishment of regional fish Councils with Secretariat.

Forestry and Forest Products Division – Improvement of forest inventories, fire control, reforestation methods, World Forestry Congress.

Distribution Division – (including I.E.F.C.) – Continuation of international allocations, studies on various commodities.

Information Division – Services to all the medai of mass communication and to non-governmental, popular and educational organizations ; part of this work will be carried out through the regional offices.

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As regards the regional activities in Europe, the following items can be mentioned :

— Regional Conference of technical representatives of European Governments prior to the Annual Conference of FAO with a view to appraising the national agricultural plans and programmes for Europe for 1950.

— Exploring possibilities for increased trade among European countries in essential agricultural commodities.

— Work on increasing the availability of agricultural requisites.

— Continued collaboration with WHO and ICEF.

— Special meetings on agricultural extension, improvement of dairy production and marketing, insects and plant disease control, livestock feeding, milk and butterfat recording, artificial insemination, grassland inprovements.

— Examination of collaboration on agricultural research, veterinary biologics, farm machinery centres and strandardization of farm machinery and equipment, standardization of plant quarantine regulations, plant protection.

Functional outline of the Organization of FAO

We thought our readers would be interested in the inner machinery of FAO, how it works and what its functions are, so we give below " A functional outline of the Organization of FAO " taken from the Director General's Report to the 4th Session of the Conference of the Food and Agriculture Organization WORK OF FAO 1947/48.

Office of Director-General

Director-General : Norris E. Dodd
Deputy Director-General : Sir Herbert Broadley, K. B. E.
Counsellor : F. L. McDougall
Special Assistant : Marc Veillet-Lavallée
Editorial Adviser : Gove Hambidge
Agricultural Economists : Paul Yates, Pierre Sinard

Functions

1. Administers the programs approved by the Conference and the Council and determines the work of the various branches of the FAO secretariat in respect to :
   (a) *Technical Work :* continuous review of general food and agriculture situation ; determination of detailed programs and priorities ; general directions and assignments to the appropriate divisions and offices ; technical preparations for meetings of Conference, Council, and appropriate committees thereof ;
   (b) *Administrative Work :* determination of general administrative, financial, and personnel policies ; administrative implementation of technical programs.
2. Performs Director-General's constitutional functions and obligations to member governments, the Conference, and the Council ; plans and serves the sessions of the latter organs as well as other conferences ; studies and solves legal and procedural issues ; conducts relations with member nations, national FAO committees, and the United Nations and other international organizations (at policy level) ; prepares and supervises official correspondence of the Director-General.
3. Controls and co-ordinates activities of regional representatives, who are personally responsible to the Director-General ; supervises corres pondence with regional representatives and technical officers assigned to their staffs.
4. Co-ordinates and supervises operations of the programs determined under 1 (a), including field operations, missions, etc. ; determines technical co-operation with other United Nations agencies and international organizations.
5. Determines the information and publications policy and prepares the reports of the Director-General.
6. Assigns staff for special duties or missions.

General Services

ADMINISTRATIVE DIVISION

Director : Frank Weisl

Functions

Responsible to the Director-General for the internal services of the Organization. Directs and coordinates budgetary, financial, personnel, and internal operations in accordance with policies approved by the Director-General.

1. *Personnel and Management :* Administers the personnel management programs ; recruitment and placement ; remuneration policies ; application and interpretation of regulations affecting staff ; retirement policies, staff welfare, etc.; stenographic pool.
2. *Budget and Finance :* Prepares the annual budget ; collects contributions and ensures safe custody of funds ; controls budgetary operations, keeps all accounts and maintains an internal audit ; advises the Director-General

on financial implications of staff and other administrative actions.

3. *Plant and Operations :* Directs housing, distribution of space, public utilities, upkeep and repairs, procurement, equipment and supplies inventories, travel arrangements, arrangements for conferences and meetings.
4. *Records and Documents :* (a) Handles registration and routing of incoming mail, dispatch of outgoing mail, collection and filing of papers and documents ; assists Information Division in keeping historical records ; and (b) administers the administrative and internal operations connected with the duplication, dispatch and sale of all documents, whether mimeographed, multilithed or printed.

Branches : Personnel and Management – Budget and Finance – Plant and Operations – Records and Documents.

INFORMATION DIVISION

Director : Duncan Wall

Functions

Advises the Director-General on public information problems. Is responsible to the Director-General for:

1. Administration of general programs for disseminating useful information resulting from work of the Organization ;
2. The Organization's advisory service on use of media and methods of communicating information in programs, including extension work, within the Organization's field ;
3. Close co-operaton with regional representatives in the informational aspects of regional activities.

In particular the Division :

(a) Directs and supervises all publications of the Organization in accordance with policies determined by the Director-General ; is responsible for clearance, editing, and translation, and coordinates the reproduction (by printing and other process) and the distribution (including sales) of all written and graphic material.

(d) Disseminates popular information through all mass communication media and through contacts with popular organizations.

(c) Provides library service for all branches of the Organization and replies to general inquiries for information.

(d) Directs information activities in the regions.

Branches : Public Information – Publications – Regional Information.

ECONOMICS AND STATISTICS DIVISION

Director : Howard R. Tolley

Functions

Serves as primary agency within the Organization for supplying basic information for the use of the Director-General on the economic aspects of international problems affecting food and agriculture. Under the instructions of the Director-General :

1. Collects and publishes economic intelligence and statistics on production, marketing, international trade, and consumption ; prepares general appraisals of world food situation, food balance sheets, crop and livestock estimates.
2. Undertakes studies of the economics of agricultural production, future production trends, and possibilities for increasing agricultural production ; analyzes and prepares recommendations relating to the economic aspects of national and regional agricultural plans and programs ; studies agricultural development and settlement and institutional factors in agricultural production.
3. Undertakes economic studies on commercial and price policies affecting production and consumption ; studies the impact of general economic development and policies, incomes, and prices on consumption of food and other agricultural commodities ; and studies measures for economic development in their relation to agriculture.
4. Promotes improvement and co-ordination of national statistics and the utilization of statistical and economic intelligence in national agricultural programs, assumes responsibility for world agricultural census, and is generally responsible for statistical standards and methods.

Branches (after January 1, 1949) Statistics – Economics of Production and Development – Food Consumption and Utilization – Economic Analysis.

Regional Contacts

REGIONAL REPRESENTATIVES

Regional Representative for Europe : A. H. Boerma
Regional Representative for the Far East : W. H. Cummings.
Regional Representative for the Near East : Mahmoud Tewfik Hefnawy Pasha
Regional Representative for Latin America : (to be appointed shortly)

Functions

1. The regional representative is directly responsible to the Director-General; informs and advises him on problems and national policies in the region ; assists him in determining policies and programs for the Organization.
2. Represents the Director-General in the region and maintains personal liaison with governments and FAO committees.
3. Supervises regional program operations in all fields within competence of FAO :
   (a) agricultural and forestry improvements ;

(b) production, marketing, distribution, and conservation of food (including fish) and other agricultural products (including forest products) ;
(c) production, trade, and consumption policies ;
(d) improvement of economic intelligence and statistics ;
(e) rural welfare ;
(f) expert missions, development and extension programs ;
(g) information.

4. Administers the regional office or offices, including such services as may be detailed there.
5. Maintains liaison with other international organizations in relation to operations in the region ; advises them on food, agricultural, fisheries, and forestry problems ; ensures technical co-operation with them.
6. Co-ordinates his action with relevant divisions at FAO headquarters.

Progam operations

AGRICULTURE DIVISION

Director (Acting) : Ralph W. Phillips

Functions

Acts as technical adviser to the Director-General and assists him in carrying out relevant recommendations of the Conference and Council in respect to the improvement methods and the protection and development of agricultural resources.
Its primary responsibility includes :

1. Conservation, development, and utilization of soil and water resources for the production of crops and livestock ;
2. Production, preparation for market, and processing of crops and livestock products ;
3. The technical aspects of marketing crop and livestock products.

Branches : Animal Industry – Plant Industry – Land Use

DISTRIBUTION DIVISION

Director : F. B. Northrup

Functions

Under the instructions of the Director-General, services the International Emergency Food Committee and its committees for the international allocation of foods and other commodities in short supply, and is responsible for all matters relating to the distribution of foodstuffs and other agricultural commodities, international commodity agreements, and the preparation of commodity bulletins and reviews.
Branches : Cereals – Fats and Oils – Fertilizer – Fibers – Livestock – Rice – Miscellaneous Commodities.

FISHERIES DIVISION

Director : D. B. Finn

Functions

Acts as technical adviser to the Director-General regarding fish and fisheries and assists him in carrying out the relevant recommendations of the Council and Conference.
Its primary responsibility includes :

1. The development and maximum utilization in perpetuity of living aquatic resources ;
2. Technical problems of fishing and handling fisheries products;
3. Production, marketing, and consumption of fisheries products.

Branches : Economics – Biological – Technological.

FORESTRY AND FOREST PRODUCTS DIVISION

Director : Marcel Leloup

Functions

Acts as technical adviser to the Director-General on problems and programs connected with forestry and forest products, and assists him in carrying out the relevant recommendations of the Conference and Council.
Its primary responsibility includes :

1. *Forest Development :* forest conservation, management and expansion with reference to general land-use economy, both for commodity and protective values ; systems and policies of forest administration, and technical methods of silviculture and forest restoration (including the training of competent personnel) ;
2. *Forest Products :* development of production, marketing, and consumption and of methods therefor ; development of wood products and wood technology.

Branches : Forestry – Forest Products

NUTRITION DIVISION

Director : W. R. Aykroyd

Functions

Acts as technical adviser to the Director-General and assists him in carrying out Conference and Council recommendations regarding nutritional problems and programs.
Its primary responsibility includes :

1. Consumption and nutrition levels ; requirements in terms of foods and of calories and nutrients ;
2. National and international food and nutrition policies ; special nutrition programs and projects ;
3. New developments in nutrition research and food technology.

Branches : Area and Field – Programs

RURAL WELFARE DIVISION

Director (Acting) : H. Belshaw

Functions

Acts as technical adviser to the Director-General regarding the general improvement of living conditions in rural districts and assists him in carrying out the relevant recommendations of the Conference and Council.

Its primary responsibility includes institutional, cultural, economic, and other environmental problems affecting living conditions, particularly :

1. Land tenure, agricultural credit, forms of organization and association (including co-operatives), and rural industries ;
2. Community organization and amenities, including water supply, electrification, transport, and communications ;
3. Demographic conditions, rural hygiene, housing, home economics, and education (including extension).

World Food Council holds fourth and fifth sessions

The Fourth Session of the Council of FAO (World Food Council) opened in Washington, November 8, 1948 and was mainly concerned with the final preparations for the Fourth Annual Conference in Washington.

The Fifth Session was held also in Washington, November 30, 1948. The Council reviewed the arrangements of the Conference, made some suggestions with a view to improving the coordination of the Commissions' future work, dealt with the matters referred to it by the Conference and decided to meet early in June 1949 in Paris, unless circumstances require an earlier meeting.

FAO Cooperates with WHO

The establishment of a Bureau of Medical Supplies, to function within the WHO Secretariat, was approved at the meeting of the Executive Board of the World Health Organization on November 4, 1948. Arrangements for close collaboration with FAO were among the other items on the agenda. Preliminary arrangements in this connection had been approved at the Health Assembly in July 1948 and the field of nutrition had received a top priority rating in WHO's programme of activities, along with the control of malaria, tuberculosis and venereal diseases, the protection of the health of mothers and children and the improvement of environmental hygiene. It was decided at the time to set up a WHO-FAO Joint Expert Committee on Nutrition to advise the two bodies on questions of mutual interest.

FAO Office for Asia and the far East

FAO announced in November 1948 that an FAO regional office for Asia and the Far East would be established in Bangkok in the near future and would be in full operation early in 1949. The FAO Regional Representative for Asia and the Far East will be William H. Cummings.

Governments of the Far East, meeting in Baguio, the Philippines, in March 1948, suggested that the FAO regional office be moved from country to country every two years. In announcing location of the office at Bangkok FAO said that this suggestion will be reconsidered at the end of 1949 in the light of experience gained.

The office at Bangkok will maintain close liaison with headquarters of the United Nations Economic Commission for Asia and the Far East at Shanghai and with other regional offices which may be set up by United Nations organizations.

With the establishment of the Bangkok office, FAO will have three regional offices in operation: at Rome, serving Europe ; at Cairo, serving the Near East ; and at Bangkok. Plans for developing FAO regional representation for Latin America are already well advanced.

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FAO and the United Nations' Economic Commission for Latin America (ECLA) have established a Joint Working Party from the staffs of the two organizations to study existing supply shortages which hamper the production and distribution of food in the Latin American regions. The main objective of the new organ is to help the twenty Latin American republics to develop their agricultural production ; this will not only alleviate their own food problems, but will also make a substantial contribution to the whole world food situation.

FAO survey of food and agriculture

The 216-page FAO publication " The State of Food and Agriculture 1948 " prepared for the Fourth Annual FAO Conference in Washington, is perhaps the most complete document of its kind ever assembled, though lack of information still leaves serious gaps. It is intended to identify the major problems in food and agriculture which will be confronting governments for the next few years. It results from a decision of the Third FAO Confer-

ence at Geneva last year that the work of each annual conference should feature a full-scale review and assessment of the current and prospective food situations.

The comprehensive survey reports on the current situation in relation to consumption, production, trend of prices, and international trade. Looking ahead, as far as available information will permit, through the next three years, the study finds that the general outlook is for restoration by 1950 or shortly thereafter of something like prewar food consumption in most of Europe and the Far East, provided no markedly unfavorable weather is experienced. Prospects are similar for fibers and forest products. Food consumption will continue high in North America and Oceania.

The central problem of Europe which is a relatively high-income area and densely populated, is to restore international trade so that she can produce and exchange industrial and other products for foodstuffs and raw materials produced overseas. If Europe's foreign trade cannot be extended, she must concentrate on programs of agricultural self-sufficiency, with possibly reduced food standards.

Pointing out that only in the past 12 months have governments come to regard as something more persistent what immediately after the war was called the 'short-term' crisis, the survey singles out five principal factors which are outstanding in the current situation :

1. The extent of war damage in Europe and Asia was underestimated. Not only did agricultural production decline, but the dislocation of manufacturing left Europe and Japan with little to export, and farmers in Asia and other areas with few incentive goods from customers needing the food.

2. The inflationary situation resulting from an inadequate supply of consumption goods to meet purchasing power has spread around the world.

3. A geographic shift of wealth arising out of the war has created special payments difficulties.

4. An increasing degree of political independence, especially in many low-income countries of the Far East, has brought new authorities into power, and these, naturally enough, express impatience with existing living standards and look around for means of improving them. This situation has resulted in claims for larger quantities of food.

5. Governments and peoples are showing a new attitude toward food. During the war many governments assumed special responsibility for their people's food supplies, and in a number of countries this policy has continued. The public became food and nutrition conscious during the war, realizing for the first time that enough food of the right kinds could effect a major improvement in health and that food production and distribution should be organized to this end. One expression of this new attitude toward food and agriculture was establishment of FAO.

Referring to nutritional targets set up by FAO in 1946 in its *World Food Survey*, where it was indicated that to reach a satisfactory level in some of the worst-fed countries within, say, 25 years, food production would have to be expanded by 100 per cent, the survey suggest that the world's governments must undertake a job of 'economic engineering' if nutrition goals are to be attained.

Two methods must principally be used. One is to bring about better distribution of supplies of food, fibers, and forestry products among the various income groups in each country ; the other is to raise the real output (and income) of the whole country and, in so far as extra supplies must be imported, to find means for making sure that the importing country can export other goods to pay for the food needed.

The *State of Food and Agriculture* 1948 is published in English, French, and Spanish. Copies are on sale at FAO sales agencies throughout the world, price (U. S.) $ 2.

Progress in food and agriculture

"National Progress in Food and Agriculture Programs 1948" is the title of a 147-page analysis, based on the annual reports of 46 countries and territories, and published by FAO before the Fourth Annual Conference in November 1948. (price 1 dollar, obtainable at FAO sales agencies throughout the world).

Although a slight gain in the food and agricultural situation was made throughout the world in 1947-48, only seven (Australia, Canada, Denmark, New Zealand, Norway, Switzerland and the United States) of 46 countries analyzed had supplies which, if equitably distributed, would have provided adequate nutrition for all their peoples.

The analysis covers food and agriculture, fisheries and forestry, along with measures taken by governments towards adjusting national economies to changing world conditions.

Taken in their entirety, the progress and program reports convey three outstanding impressions :

1. Most governments are determined to improve the nutritional levels of their people and their food and agriculture position generally. Toward this end a number of countries have formulated definite and positive programs for the next few years ahead.

2. Most countries are giving up their wartime and postwar policies of increasing production at all costs ; they are giving more serious consideration to questions of production efficiency and to longer-term economic problems of demand.

3. Agriculture, fisheries, and forestry may be on the brink of a new era of advancement, especially if helped by the effective application of modern science and technology.

World fiber production shows gain over last year

World production of fibers in 1947-48 was about one-fifth larger than a year earlier, but still 14 per cent below the output of the last prewar season. With a growth of world population by approximately 10 per cent over the last decade, the 1947-48 output of fibers per caput was about 23 per cent below that of prewar. These facts are reported in *World Fibers Review* 1948, released by FAO in November 1948.

The world area under fiber crops, severely curtailed during the war years, expanded slowly during the first three postwar seasons. Expansion was limited by the overriding necessities of the world food situation. Present indications are that world fiber plantings to be harvested in 1948-49 will be appreciably larger than in the previous season.

While more than nine-tenths of world fiber production is still accounted for by the natural fibers, — cotton, wood, raw, silk, flax, hemp, jute, abaca, sisal, henequen, — the output of man-made fibers has resumed a strong upward trend in the postwar period.

World consumption of the major natural fibers, while still below prewar, has been running in excess of current production during the first three postwar seasons.

World Fibers Review 1948, in English, and French is on sale at FAO sales agencies throughout the world, price (U.S.) 25 cents. Spanish edition is in preparation.

Report of the FAO Mission for Siam

The 120-page *Report of the FAO Mission for Siam* was released by FAO in November 1948 (Price U.S. $ 1.50).

Provision of a small board to map out a forward-looking program which would be kept under continuous review would do much, the Mission believes, to cure a condition from which Siam has suffered severely — a lack of continuity in agricultural development.

In all, 128 recommendations for the improvement of Siamese agriculture and forestry are contained in the report. They range through the whole field of agriculture, making specific proposals for increased agricultural production and forestry output, going hand-in-hand with improved conservation practices. Great attention is given to higher rice production, for, the Mission says, Siam and other countries of Southeast Asia will greatly benefit if Siam will grow and export more rice.

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The monthly bulletin " Food and Agricultural Statistics " published by FAO (see also No. 7, page 604 of " Food and Agriculture ") contains in its October issue data on estimates of grain production in 1948 in Europe (excluding the U.S.S.R.), North America, Asia and Africa along with estimates of the production of potatoes in 1948 in Europe and North America.

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No. 4 of the " Fisheries Bulletin " of FAO was issued in November 1948. Publication mentioned in No. 5, page 404 of " Food and Agriculture ".

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" *Yearbook of Forest Products Statistics* 1947 " and " *Yearbook of Fisheries Statistics* 1947 " were recently published by FAO. The first 209 page publication (price 2 dollars) gives in 60 tables statistical data on output, imports, exports of roundwood veneers, sleepers, lumber balances, wood pulp and pulp products, paper, paperboard and fiberboards, forest products other than wood, world trade and consumption. The 334 page " Yearbook of Fisheries Statistics 1947 " (price 4 dollars) surveys in 228 tables trade, landings and numbers of craft and fishermen.

Both publications are bilingual (English and French).

FILM EXCHANGE

The National Nutrition Council (FAO Committee) of Norway in Oslo has supplied us with the list of films printed below which it would like to exchange with other countries. The Landburksdepartementets Films-og Billedkontor (The Film and Photograph Bureau of the Ministry of Agriculture) is very interested to establish a basis for exchange of films. A very satisfactory arrangement is already in existence between Norway and other Northern countries such as Denmark, Iceland, Finland and Sweden. If an exchange is effected the institution in the country receiving the film will acquire all rights as regards distribution, sale etc.

For further information please apply either to to Kontorsjef L. Grimelund Kjelsen, Landbruksdepartementets Film og Billedkontor Kirkegt. 14-18 Oslo, Norway or to the Information Service Regional European Office, Villa Borghese, Rome, Italy

BUREAU OF SLIDES AND FILMS, MINISTRY OF AGRICULTURE, NORWAY

LIST OF FILMS AND SLIDES OWNED BY THE BUREAU ON 1 NOVEMBER 1947.

(1) Clearing and settling. Monochrome film, circa 40 minutes (3 reels). (2) Clearing and settling. M. f. circa 58 min. (4 reels). (3) The heart and circulation of the blood. M. f., c. 12 min. (1 reel). (4) The four-stroke engine M. f., c. 15 min. (1 reel). (5) The vegetative cycle of a plant. M. f., c. 13. min. (1 reel). (6) The sensitiveness of plants. M.f., c. 16 min. (1 reel). (7) Sequence of fern generations. M. f. c. 19 min. (2 reels). (8) How plants protect themselves. M. f., c. 12 min. (1 reel). (9) Vigour in plants. M. f. c,, 17 min. (1 reel). (10) The dandelion. M. f., c. 14 min. (1 reel). (11) Rue. M. f., c. 15 min. (1 reel). (12) Heredity. M. F., c. 26 min. (2 reels). (13) Hoof care - instruction in shoeing. M. f., c. 31 min. (3 reels). (14) Growth of the chicken. M. f., c. 33 min. (3 reels). (15) Care of split hoofs of cattle. M. f., c. 14 min. (1 reel). (16) Oats. M. f., c. 16 min. (1 reel). (17) Wheat cultivation in Norway. M. f., c. 35 min. (3 reels). (18) Fruit and berry growing in Norway. M. f. c. 58 min. (5 reels). (19) Control of 'furuspinneren'. M. f., c. 7 min. (1 reel). (20) The 'furuspinneren'. M. f., c. 15 min. (1 reel)). (21) The frog. M. f., c. 22 min. (2 reels). (22) High and low tide. M. f., c. 16 min. (1 reel). (23) Sheep-breeding in Norway. M. f., c. 46 min. (3 reels). (24) The beaver. M. f., c. 17 min. (2 reels). (25) The thresher. M. f. c. 30 min. (2 reels). (26) Treatment and utilization of potatoes. M. f., 23 min. (2 reels). (27) Food. M. f., c. 28 min. (2 reels). (28) The forest worker and his tools. M. f., c. 15 min. (1 reel). (29) From the seed to the forest. M. f., c. 18 min. (2 reel). (30 Market gardening in Norway. M. f., c. 73 min. (5 reels). (31) Potato cultivation without the use of horses. M. f., c, 26 min. 2 (2 reels). (32) The crags where aquatic birds nest. M. f., c. 22 min. (2 reels). (33) X-rays. M. f., c. 25 min. (2 reels). (34) Ant-hills. M. f., c. 21 min. (2 reels). (35) Lizards. M. f., c. 14 min. (1 reel). (36) The wolwerene and the lynx. M. f., c. 10 min. (1 reel). (37) The wolf. M. f., c. 8 min. (1 reel). (38) Polar animals. M. f., c. 5 min. (1 reel). (39) The life of animals in the archipelago. M. f., c. 24 min. (2 reels). (40) Sources of heat in Iceland. M. f., c. 17 min. (1 reel). (41) Fox-breeding. M. f., c. 11 min. (1 reel). (42) The bluebottle. M. f., c. 23 min. (2 reels). (43) Whaling. M. f., c. 15 min. (1 reel). (44) Mountain birds of prey. M. f., c. 18 min. (1 reel). (45 a) Mountain birds. M. f., c. 14 min. (1 reel). (45 b) Mountain birds. M. f., c. 16 min. (1 reel). (46) The birds of the lowlands. M. f., c. 16 min. (1 reel). (47) The life cycle of bees. M. f., c. 26 min. (2 reels). (48) Visit to an electric-light bulb plant in Norway. M. f., c. 11 min. (1 reel). (49) Cultivated pastures. M. f., c. 27 min. (2 reels). (50) The Laplanders of Samene. M. f., c. 15 min. (1 reel). (51) Life in a fresh-water pool. M. f., c. 13 min. (1 reel). (52) Hand-tools. I. Small tools. M. f., c. 40 min. (3 reel). (53) Hand-tools. II. Large tools. M. f., c. 16 min. (1 reel). (54) Hand-tools. III. Tools for felling. M. f., c. 64 min. (4 reels). (55) Hand-tools. IV. Tools for working wood. M. f., c. 19 min. (1 reel). (57) Hand-tools. V. Blacksmith's tools. M. f., c. 18 min. (1 reel). (57) Flies injurious to man and domestic animals. M. f., c. 32 min. (3 reels). (58) Iron and steel production. M. f., c. 10 min. (1 reel). (59) Cure of tuberculosis. M. f., c. 19 min. (1 reel). (60) Spring farm operations. M. f., c. 14. (1 reel). (61) Manures. Storage, utilization. M. f., c. 47 min. (3 reels). (62) Forest exploitation in Norway I. M. f., c. 17 min. (1 reel). (63) Forest exploitation in Norway. II. Transport of timber. M. f., c. 16 min. (2 reels). (64) Forest management. M. f., c. 26 min. (2 reels). (65) Floating of timber. M. f., c. 23 min. (2 reels). (66) Excursion in the eastern forests of Finnmark. M. f., c. 13 min. (1 reel). (67) The modern bakery. M. f., c. 31 min. (2 reels). (68) Fire! M. f., c. 34 min. (2 reels). (69) Development of sole spawn. M. f., c. 15 min. (1 reel). (70) Wheat harvesting and quality. M. f., c. 28 min. (2 reels). (71 Cultivate the land. M. f., c. 80 min. (5 reels). (72) Farming with gasogene tractors. M. f., c. 60 min. (4 reels). (73) Preparation of fish balls. M. f., c. 8 min. (1 reel). (74) The sports in words and pictures. L. M. f., c. 12 min (1 reel). (75) The sports in words and pictures. II. M. f., c. 11 min. (1 reel). (76) The sports in words and pictures. III. M. f., c. 12 min. (1 reel). (77) The sports in words and pictures. IV. M. f., c. 13 min. (1 reel). (78) Poultry-breeding in Norway M. f., c. 35 min. (3 reels). (79) Beekeeping. M. f., c. 21 min. (2 reels). (80) Visit to the Romedal Station in Norway for raising queen bees. M. f., c. 10 min. (1 reel). (81) Excursion to a mountain pasture. M. f., c. 18. min. (2 reels). (82) Iver Maur in the dangerous zone. M. f., c. 16 min. (1 reel). (83) Sköyer-Lasse and Topsy. M. f., c. 9 min. (1 reel). (84) Jens and Petter Lurerud. M. f., c. 43 min. (4 reels). (85) The sports in words and pictures. V. M. f., c. 15 min. (1 reel). (86) The sports in words and pictures. VI. M. f. c. 15 min. (1 reel). (87) 'Maalerlarven' M. f., c. 11 min. (1 reel) (88) The bat. M. f., c. 8 min. (1 reel). (89) From the egg to the chicken. M. f., c. 5 min. (1 reel). (90) Amoeba. M. f., c. 11 min. (1 reel). (91) Some wild animals. M. f., c. 11 min. (1 reel). (92) Setesdalen. M. f., c. 43 min. (2 reels). (93) Beekeeping in Norway. M. f., c. 34 min. (2 reels). (94) Plant props. I. Tying. M. f., c. 18 min. (2 reels). (95) Care of bees M. f., c. 43 min. (3 reels). (96) The mongoose and the spectacled snake. M. f., c. 6 min. (1 reel). (97) The Fordson tractor in operation. M. f., c. 24 min. (2 reels). (98) The Ford-Ferguson tractor in operation. M. f., c. 24 min. (4 reels). (99) The sports in words and pictures. VII. M. f., c. 14 min. (1 reel). (100) The Norwegian Red Cross. M. f., c. 22 min. (2 reels). (101) Domestic animals. M. f., c. 66 min. (4 reels). (102) The eye and eyesight. M. f., c. 9 min. (1 reel). (103) The life of birds in the forests. M. f.

c. 17 min. (1 reel). (**104**) Bears. M. f., c. 4 min. (1 reel). (**105**) Herring--fishing in the western seas. M. f., c 17 min. (1 reel). (**106**) The sewing-machine. M. f., c. 5 min. (1 reel). (**107**) Flowers. M. f., c. 13 min. (1 reel). (**108**) Protoplasm. M. f., c. 8 min. (1 reel). (**109**) Animal breeding and development M. f., c. 20 min. (2 reels). (**110**) Mechanical industries : locomotives. M. f., c. 24 min. (2 reels). (**111**) Winter in the forest. M. f., c. 8 min. (1 reel). (**112**) Autumn in the forest. M. f., c. 9 min. (1 reel). (**113**) Horses in freedom. M. f., c. 16 min. (1 reel). (**114**) The right of the strongest. M. f., c. 6 min. (1 reel). (**115**) A family of storks. M.f., c. 4 min. (1 reel). (**116**) A family of foxes. M. f., c. 13 min. (1 reel). (**117**) The snail. M. f., c. 10 min. (1 reel). (**118**) Cooperative laundries. M. f., c. 25 min. (2 reels). (**119**) How an old kitchen can be modernized. M. f., c. 29 min. (2 reels). (**120**) Chick death. M. f., c. 23 min. (2 reels). (**121**) Hand milking of cows. M. f., c. 35 min. (2 reels). (**122**) Prize horses. M. f., c. 11 min. (1 reel). (**123**) Mechanical milking of cows. M. f., c. 38 min. (3 reels). (**124**) Distillation of berries. M. f., c. 20 min. (2 reels). (**125**) J.U.F. (Swedish film on rural extension work). c. 25 min. (2 reels).

SOUND FILMS CAN ONLY BE DUBBED WITH SPECIAL APPARATUS

(**1**) Everyone's work. M. f., c. 23 min. (1 reel). (**2**) Tennessee Valley. M. f., c. 37 min. (1 reel). (**3**) The bee kingdom (country of honey). M. f., c. 14 min. (1 reel). (**4**) The Vims wasp. M. f., c. 10 min. (1 reel). (**5**) A film on the potato. M. f., c. 15 min. (Danish). (1 reel). (**6**) The life of animals. M. f., c. 56 min. (Russian). (2 reels).

LANTERN SLIDES

(**1**) Survey of Swedish agriculture. 56 slides. (**2**) (**2**) Flies. Their control. 36 slides. (**3**) Vitamins and minerals. 48 slides. (**4**) Norwegian cattle breeds. 30 slides. (**5**) Potato diseases. In colour. 45 slides. (**6**) Diseases and pests of tubers. Control measures. In colour. 49 slides. (**7**) Hoof care and shoeing. 38 slides. (**8**) Apple diseases. In colour. 36 slides. (**9**) Poultry breeds. In colour. 53 slides. (**10**) Manures. Storage and use. In colour. 57 slides. (**11**) Improvement of kitchens. 54 slides. (**12**) Milking and milk hygiene. 58 slides.

U N O

European Health Conference

Detailed recommendations for immediate direct help from the World Health Organization to war-devastated countries in Europe were made by the European Health Conference which concluded two days of discussion in Geneva on November 16, 1948. The conference, attended by representatives of seventeen Western and Eastern European countries, was convened by WHO in order to assemble data in connexion with the establishment of *a special temporary administrative office for the health rehabilitation of Europe.*

According to a decision taken during the recent meeting of the WHO Executive Board, the actual setting up of the office is to be left to the Director-General of the World Health Organization, who is also authorized to select a site for it after consultation with the countries concerned.

Although the delegates were unanimous in recognizing that the limitations of the WHO Budget for 1949 would prevent any large-scale action, there was a general feeling that a regional organization as defined in the WHO Constitution could best cope with the enormous needs of these regions. It was therefore recommended that this special office should function for a short time only and that in the light of experience acquired during the first months its character should be revised at the next session of the Executive Board. The Conference recommended Geneva as the potential site of the Office.

Asked to state specifically what kind of services they required from WHO under the program approved last July by the World Health Assembly, the representatives requested three forms of help :

(1) Fellowships for local medical and public health personnel to study modern techniques abroad ;

(2) Exchange of health information, visits of experts, etc.

(3) Medical supplies, particularly medical literature and special teaching equipment. In this connexion close liaison will be maintained with the Bureau of Medical Supplies which is to be set

up shortly within the WHO Secretariat to advise national authorities on procurement problems.

It was pointed out that for such important questions as the reconstruction of hospital facilities and the production of essential drugs not only the public health field but also the over-all economic situation was involved. The Conference recommended that close liaison be maintained between the WHO special administrative office and the Economic Commission for Europe. In this connexion several delegates said that political discrimination was depriving many European countries of important drugs such as penicillin and streptomycin. To this statement the U. K. Alternate Delegate Mr. T. Lindsay stated that all penicillin orders taken by the British manufacturers had been or were being filled. Concerning streptomycin he added that there was a world shortage of this antibiotic which could be remedied only by increasing the production. The cooperation of the ECE, he said, would be invaluable in that domain.

At the close of the meeting, its Chairman, Dr. van den Berg (Netherlands) declared that this conference had proved invaluable for securing an accurate and fairly complete picture of the immense health needs of European countries damaged by the war. He deplored the fact, however, that several of the governments invited had been absent and expressed the hope that they would make their requests for help known to the Organization as soon as possible.

According to the wish expressed by several delegates, it was suggested that another such Conference be convened in a few months to review the work accomplished by the WHO Special Office for Europe. It was felt that a meeting of that kind would provide the best method for maintaining close contact between all the governments concerned and would bring out useful suggestions for the future.

Health Conference for Eastern Mediterranean Area

The World Health Organization has called a conference of Eastern Mediterranean countries, with a view to establishing a WHO Regional Office in that area. The meeting opened in Cairo February 7, 1949 ; representatives and observers from some 20 countries and territories have been invited to attend.

The Eastern Mediterranean area, as defined by the World Health Assembly, includes Egypt, Saudi Arabia, Irak, Syria, Lebanon, Transjordan, Yemen, Iran, Turkey, Pakistan, Palestine, Ethiopia, Eritrea, Tripolitania, British Somaliland, French Somaliland, Aden and Cyprus. France and the United Kingdom have been invited to the Cairo Conference to represent territories for the conduct of whose international relations they are responsible.

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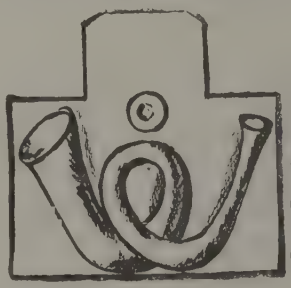
The Inland Transport Committee of the United Nations Economic Commission for Europe concluded its five-day session at Geneva on 29 October 1948 by unanimously adopting twenty-nine resolutions and recommendations to governments designed to expand and improve Europe's rail, road and waterway transport services. Stating among other things that " the improved movement of perishable foodstuffs requires to be dealt with as a matter of urgency ", the Committee asked governments to give every possible assistance to the Secretariat and experts in its bringing together to survey various aspects and probable developments of perishable goods traffic. It called for the convening of the ECE Working Party on Transport of Perishable Foodstuffs as soon as practicable after the completion of the survey, and invited the Working Party to include in its studies the question of what international organizational measures would most effectively promote the rational development of refrigerator transport.

It will be remembered that also the International Meeting of Experts on Horticulture convened by FAO in Rome on March 17-19, 1948 called for the need for complete information on transport services and requirements and for giving full support to the Inland Transport Committee of ECE (cf. No 5, page 410 of this Bulletin).

NEWS IN GENERAL



European Confederation of Agriculture

The International Confederation of Agriculture which was founded in Switzerland 62 years ago by Mr. G. Meline, has recently been changed to European Confederation of Agriculture, in order to distinguish it from the World Organization of Agricultural Producers established after the war.

Prof. Ernest Laur has been appointed Chairman of the European Confederation. All national farmers' associations which include in their program free organization and the protection of the family farm, have been invited to join. The Confederation plans to promote free agricultural cooperation and to undertake an organic study, on the European level, of the conditions of small and medium operators.

International Maritime Committee

The Preparatory Committee of the Inter-Governmental Maritime Consultative Organization opened its second meeting, 30 November 1948, at Lake Success, New York. Delegates from 12 member countries attended : Argentina, Australia, Belgium, Canada, France, Greece, India, the Netherlands, Norway, Sweden, the United Kingdom and the United States.

The Preparatory Committee's task was to prepare a work programme under terms of the IMCO convention, which was drawn up at the UN Maritime Conference at Geneva, Switzerland, last February and March. The Convention itself will not come into force, however, until ratified by 21 countries, and so far only Canada has ratified it.

Purpose of the IMCO is to seek cooperation among governments on marine technical problems, shipping regulations, and safety rules.

CONGRESSES AND MEETINGS

The first Austrian plant protection meeting

The Austrian Ministry of Agriculture and Forestry convened the first Austrian Plant protection Meeting in Vienna on September 2-4, 1948. Mr. Josef Kraus, Minister of Agriculture, and Forestry, promised in his opening speech to give his support to this work.

Dr. Ferdinand Beran, Director of the Plant Protection Institute stressed the necessity of training more technicians for this work.

The reports mentioned below were submitted during the meeting :

Fighting of Bunt by Dr. F. Pichler ; Winter Spraying of Fruit Trees by Dr. F. Beran ; Combatting of Fruit Tree Diseases by Dr. H. Wenzl ; Field Pests in Eastern Austria by Dr. O. Watzl ; Chemical and Physical tests of Plant Protection Preparations Dr. P. Reckendorfer ; *Cuscuta racemosa* by Dr. G. Kraus ; Timber destroying funghi by Dr. K. Lohwag ; San-José Scale by Dr. H. Böhm ; Test of Modern Plant Protection equipment by Mr. E. Kahl ; Biological Examination of the Colorado Beetle by Mr. W. Faber ; Plant Protection in Austria by Dr. F. Hengl ; Combatting of mice and Worms in the Tyrol by Dr. Hans Peter ; Plant Protection in Carinthia Dr. Reisinger ; Development of the Industry of Preparations for Plant Protection by Mr. Herz Leitgeb ; Production of Preparations for Plant Protection in Austria by Mrs. H. Krones ; Requirements and Distribution of Plant protection Preparations by Mr. E. Haydn ; Testing of Preparations in 1948 by Dr. F. Beran ; Legislation by Dr. H. Wenzl.

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Dr. R. T. Allman, of the Agriculture Division of FAO, and Dr. I. Moskovits, of the same Division assigned to the Regional European Office in Rome, attended the Meeting of the International Dairy Federation (IDF) in Copenhagen, Denmark, 3 – 8 November 1948, and also the IDF Annual General Assembly which took place immediately afterwards. Many technical problems were discussed most of which will be submitted to the International Dairy Congress to be held in Stockholm, Sweden in August 1949. In addition, the terms of a close collaboration between IDF and FAO were established.

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A Conference on United Nations and Specialized Agency Documentation was held in Paris under the auspices of The Carnegie Endowment on 21 November of last year. The aim of the conference was to try and establish a unified system of indexing, distribution and processing of all United Nations documents as well as of those of the United Nations Specialized Agencies. The meeting was attended by delegates of eleven nations, by Mr. Benjamin Cohen, Assistant Secretary General of the United Nations Department of Public Information, various members of the European Information Centres and by representatives of UNESCO, ICAO, ILO and FAO. Many representatives of libraries were present and the Chairman of the conference was Mr. Julien Cain, Director General of the National Library of France.

FAO Veterinary Meeting in Warsaw

The European Meeting of Veterinarians organized by FAO met in Warsaw University on 11 December, 1948. Discussions on the newest scientific developments concerning disease of livestock and measures for combating these diseases were the order of the day. Delegates from the following countries attended : Austria, Bulgaria, Czechoslovakia, Italy, Hungary, Poland, the Netherlands, Norway, Sweden and the United Kingdom. Many subjects were discussed and from amongst the papers read

we should like to mention: Swine erysipelas, by Prof. A. Trawinski, Poland; Tuberculosis, by Prof. T. Dalling, United Kingdom; Dourine, by Dr. S. Krauss, Poland; Swine fever (hog cholera) by Prof. T. Dalling; Newcastle disease, by Dr. M. M. Kaplan, FAO; Brucellosis, by Dr. A. W. Stableforth, United Kingdom; Teschen disease, by Dr. V. Dolecek, Czechoslovakia; Nutritional deficiency diseases, by Dr. R. Allman, FAO; and Mastitis by Dr. A. W. Stableforth. Furthermore, these lectures were elaborated by laboratory work and many films, as well as field demonstrations. The meeting was under the general direction of Dr. K. V. L. Kesteven, FAO Veterinarian.

We list here some of the films shown: The Fight against Rabies, Laboratory Diagnosis of Rabies, Bovine Surgery, Vesicular Stomatitis of Swine, Spread and Prevention of Trichinosis, Pullorum Disease Control, Swine Brucellosis, Rickets in Calve..

Lists of selected books concerning veterinary medicine were also distributed. The meeting proved extremely useful and the exchange of information and views by the more than sixty different delegates was appreciated.

International meeting on hybrid corn in Rome

The International Meeting on Hybrid Corn which opened at the European Regional Office of FAO in Rome on 10 January 1949 held its final session on 13 January under the chairmanship of Professor Luigi Fenaroli, Director of the Maize Experiment Station at Bergamo, Italy. The delegates of Czechoslovakia, Egypt, France, Italy, the Netherlands, Portugal, Switzerland, the United Kingdom and the UK and U. S. Occupation Zones of Germany dealt largely with problems arising from the introduction into their respective countries of U. S. developed hybrid corn which has considerably increased the per acre yield.

It was decided that the pure line seed bred in one participating country should be exchanged with others developed in countries having approx. the same climatic conditions, so that the most adapted types of hybrids could be developed in Europe and the Near East as soon as possible.

In order to make this collaboration more intensive, the Meeting recommended that an *Association for maize improvement in Europe and the Near East* should be established as a permanent organization, whose membership would be open to all specialists and research workers of different official experimental stations, working on maize in Europe and the Near East. The seat of the Association will be at the Experimental Station to which its Secretary-General, when elected, will belong. Its main objective will be to facilitate the exchange of breeding materials, carrying out cooperative experimental investigations, and disseminating the results obtained.

Before the Meeting adjourned, a five-man committee was elected to carry on the activities of the Association until its first Annual Meeting which is to take place next year, when its officials will be formally elected.

This Organization, which is the first of its kind, on an international scale in Europe, will doubtless greatly contribute to fostering this important agricultural work which has a far-reaching bearing on the economy of all countries concerned.

The Meeting greatly appreciated the assistance and guidance given by the U. S. Department of Agriculture expert Dr. Merle T. Jenkins, who put at its disposal the benefit of his long experience in this field.

International Congress on sheep breeding in the Mediterranean countries

The Italian Breeders' Association with the assistance of the Italian Wool Association and of the Italian Dairy Industry Association and sponsored by the Italian authorities and particularly by the Italian Ministry of Agriculture and Forests, will convene an international congress on sheep breeding in the Mediterranean countries to be held in Rome 4 - 7 April, 1949. The program of the congress comprises five main subjects on problems of the sheep industry in these countries and the various aspects of this industry (production of wool fleece, milk and mutton, the nutrition of sheep and veterinary problems connected with sheep production).

On the occasion of the Congress an exhibition will take place, at which different groups of important sheep breeds will be shown and also products of the sheep industry (wool, fur, and cheese) as well as publications, equipment and material used by veterinarians etc.

Conferences and congresses

February	7	*Lake Success*, 8th Session of the UN Economic and Social Council.
	7	*Cairo*, Conference of the World Health Organization for the Eastern Mediterranean zone.

	13	*Palmira* (Colombia), Conference on foodstuff infestation control, FAO.
March	7	*London*, International Sugar Council.
	20 to 26	*Cairo*, World Technical Conference.
	21	*Geneva*, 4th Session of the Economic Commission for Europe.
	27	*Mysore* (India), Forestry and Wood Utilization Conference, FAO.
	28	*London*, 6th Meeting of the Rubber Working Party.
April	4 to 7	*Rome*, International Sheep-breeding Congress.
	25 to 4 May	*Montreal*, Preparatory Conference on World Pulp Problems.
May	4 to 8	*Zurich*, 5th International Conference on fertilizers and chemicals for agriculture.
	16	————International Scientific Conference on the preservation and utilization of national resources.
	——	*Paris*, International Engineers Congress for the development of overseas countries.
June	13 to 17	*Quebec*, Biennal Congress of the International Chamber of Commerce.
	22 to 7 July	*Noordwijk aan Zee* (Netherlands), 5th International Pasture Congress.
	———	*Paris*, FAO Council.
July	21 to 28	*London*, IInd International Crop Protection Congress.
July	———	*Guelph* (Canada), International Congress of Agricultural Producers.
	——— 10	*Helsinki*, 3rd World Forestry Congress.
August	8 to 13	*London*, International Veterinary Congress.
	15 to 19	*Stockholm*, World Dairy Congress.
November	19	*Habana*, 5th Annual FAO Conference.

Fairs and Exhibitions

February	2 to 27	*Brussels*, International Exhibition of agricultural machinery and tools.
	15 to 15 March	*Gezira* (Cairo), XVIth Agricultural and Industrial Exhibition.
	18 to 27	*Copenhaghen*, Danish Industrial Fair (foodstuffs, textiles)
	24 to 14 March	*Paris*, Household Goods Show.
March	1 to 6	*Paris*, Agricultural Machinery Show.
	2 to 7	*Paris*, 31st Apiculture Exhibition and 20th Honey Fair.
	13 to 20	*Vienna*, International Spring Fair.
	13 to 20	*Prague*, International Fair.
	13 to 21	*Verona* (Italy), International Agricultural Fair and Horse Show.
	23 to 27	*Budapest*, Stockbreeding and Agriculture Exhibition.
	29 to 7 April	*Utrecht*, Royal Fair of Netherlands Industries.
	30 to 15 April	*Brussels*, International Fair.
April	3 to 23	*Turin*, International Exhibition of Textile Crafts and Fashion.
	12 to 27	*Milan*, International Fair.
	23 to 2 May	*Lyons*, International Fair.
	23 to 10 May	*Poznan*, International Trade Fair.
May	7 to 17	*Basel*, Swiss Industries Fair.
	10 to 25	*Valencia* (Spain), International Sample Fair.
	14 to 30	*Zagreb*, International Fair.
	17	*Budapest*, International Fair.
	21 to 6 June	*Paris*, International Fair.
	29 to 6 June	*Bône* (Algeria), Agricultural Fair for the producers of North Africa, France, Overseas France and Abroad.
June	10 to 25	*Barcelona*, International Fair.
	18 to 3 July	*Lille*, International Fair.
	19 to 4 July	*Bordeaux*, International Fair.

AGRICULTURAL NATIONAL PUBLICATIONS

Below we publish a selection of agricultural periodicals. We trust these will be of interest to our readers.

AUSTRIA (PART II)

Natur und Heimat. Linz. The Austrian cosmos. Year 1948. Monthly. Annual subscription 46 S.

Natur und Technik. Vienna. Year I (1947/48). Monthly. Annual subscription 32 S.

Oberösterreichische Landwirtschaftszeitung. – Linz. Agricultural and forestry reports. Year 20 (1948). Published weekly.

Der österreichische Bauernbündler – Vienna. Year 4 (1948). Published weekly. Annual subscription, 20 S.

Oesterreichische botanische Zeitschrift – Vienna. Publishers : Springer. Published at irregular intervals. Price per number according to size (about 25 S.).

Oesterreichische Chemiker-Zeitung – Vienna. Year 49 (1948). Monthly. Annual subscription 100 S. Publishers : Springer, Vienna.

Oesterreichs Forst- und Holzwirtschaft – Official organ of the Ministry of Agriculture and Forestry. Vienna. Year 3 (1948). Issued fortnightly. Annual subscription 40 S. Publishers : Oesterr. Agrarverl., Vienna.

Oesterreichische Kleintierzüchter – Vienna. Technical journal for poultry and rabbit breeding. Year 1948. Fortnightly.

Die österreichische Milch- und Fettwirtschaft – Vienna. Year 3 (1948). Annual subscription 14 S. Publishers : Oesterr. Agrarverl.

Der österreichische Volkswirt – Vienna. Year 34 (1948) Issued with supplement '*Die Bilanz*' 3 times a month. Annual subscription 90 S.

Oesterreichische Weidwerk – Vienna. Illustrated monthly on hunting, fishing and nature protection. Year 1948. Published monthly. Annual subscription 24 S.

Oesterreichische Weinzeitung – Vienna. International technical wine journal. Year 3 (1948). Weekly Annual subscription 45 S.

Oesterreichische Zoologische Zeitschrift – Vienna. Publishers : Springer. Published at irregular intervals. Price according to size (about 35 S.).

Der Pflanzenarzt – Vienna. Journal on plant protection and pest control. Issued by the Plant Protection Institute in Vienna. Year I (1948). Monthly. Annual subscription 9 S.

Pflanzenschutzberichte – Vienna. Issued by the Plant Protection Institute in Vienna. Year 1948. Monthly. Annual subscription 20 S. Publishers : Oesterr. Agrarverl.

Der Pflug – Vienna. Year I (1948). Monthly. Annual subscription 24 S. Publishers : Industrie u. Fachverl., Vienna.

Sägewerk und Holzwirtschaft – Vienna. Official journal of the Austrian saw-mill industry. Year 2 (1948). Monthly. Annual subscription 39 S. (with supplement '*Informationsdienst*').

Das Schrifttum der Bodenkultur – Bibliographical information on agriculture and forestry, cultivation technique and food industry. Assembled at the Library of the College of Soil Science. Published bimonthly. Year I (1948). Annual subscription 30 S. (abroad 7 Swiss fr.). Publishers : Oesterr. Industrie-u. Fachverlag, Vienna.

Steirischer Bauernbündler – Graz. Year 8 (1948). Weekly. Annual subscription 20 S.

St. Hubertus – Austrian hunting journal. Vienna. Year 34. Monthly. Annual subscription 24 S.

Tiroler Bauern Zeitung – Innsbruck. Year 41. Weekly. Annual subscription 26 S.

Das wirtschaftliche Sägewerk – Vienna. Journal for furthering improvements in Austrian sawmills. Year 4 (1948). Published twice a month. Annual subscription 24 S.

Umwelt – Vienna. Journal of the Wilhelminenberg Biology Station. Year I (1947/48) Monthly. Annual subscription 52 S. Publishers : Scholle, Vienna

Universum – World. Knowledge. Improvement. Vienna. Monthly. Year 2 (1947/48). Annual subscription 34 S.

Wissenschaft und Weltbild – Vienna. Quarterly review covering all branches of research. Year I (1948). Comes out 4 times a year. Price varies (about 12 S.).

Zeitschrift für Vitamin-, Hormon- und Fermentforschung – Vienna. Published at irregular intervals. Price varies (about 15 S.).

Zentralblatt für die gesamte Forst- und Holzwirtschaft – Vienna. Journal of the College of Soil Science, Vienna. Year 70 (1947/48). Published at irregular intervals. Price varies (about 30 S.). Publishers : Springer, Vienna.

Supplementary list :

Mitteilungen der forstlichen Bundes-Versuchsanstalt Mariabrunn – Vienna. Reports on forestry experiments in Austria. Published by the Austrian State printing works. Comes out once yearly. Last number November 1947. Price 20 S.

Sydowia Annales Mycologici – Editi in notitiam scientiae mycologicae universalis. Vienna. Year I (1947). Provisionally four numbers a year. Annual subscription 40 Swiss francs.

Das Landarbeiter – Archiv. Vienna. Monthly review on trade-union questions, sociology, insurance and agrarian policy. Year 3 (1948); Monthly. Annual subscription 18 S.

Amtliche Veterinärnachrichten – Vienna. Edited by the Veterinary Division of the Ministry of Agriculture and Forestry. Year 21 (1948). Published fortnightly, Annual subscription 35 S. Publishers : Oesterr. Staatsdruckerei, Vienna.

Bau und Holzarbeiter – Journal of the Austrian Construction and Timber Workers Union. Year 43 (1948). Monthly. Annual subscription 4 S.

Der Berufsgärtner – Vienna. Year I (1948). Monthly. Annual subscription 6 S.

Internationale Fachzeitschrift für Brau-Gärungs- und Kältetechnik – Vienna. Year I (1948). Monthly. Annual subscription 39 S.

Jahrbuch der Hochschule für Bodenkultur in Wien – 1. (General) edited by Prof. Dr. Flatscher, engineer : 75 years College of Soil Science in Vienna. 2. (scientific) edited by Prof. Dr. Kisser : Progress in soil science. Price Part 1 : 28 S. Part 2 : 35 S. Publishers : George Fromme & Co., Vienna.

Annals of the Central Institute for Meteorology and Geodynamics. Vienna. Year 1948, Vol. 93.

Der Landbote – Vienna. Journal of the agricultural and forestry workers union Year 29 (1948) Annual subscription 6 S.

Obst und Garten – Linz. Monthly review on fruit, vegetables and horticulture. Year 3 (1948). Monthly. Annual subscription 21 S.

Oesterreichische Fischerei – Vienna. Technical fishery journal. Year I (1948), Annual subscription 24 S. Publishers : Oesterreichischer Agrarverlag.

Der Salzburger Bauer – Salzburg. Technical and information journal of the Salzburg Chamber of Agriculture. Published fortnightly. Annual subscription 4 S.

Wetter und Leben – Vienna. Journal on practical bioclimatology. Year I (1948). Monthly. Annual subscription 44.50 S.

Der Wiener Bauernbündler – Vienna. Year I (1948). Published fortnightly. Annual subscription 20 S. Publishers : Oesterr. Agrarverlag, Vienna.

Der Winzer – Vienna. Technical Austrian wine-growing journal. Year 4. Monthly. Annual subscription 10 S. Publishers : Oesterr. Agrarverlag, Vienna.

Journal for cell research and microscopic anatomy. Vienna. Vol. 34, 1948. Published at irregular intervals. Price varies. Publishers : Springer, Vienna.

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